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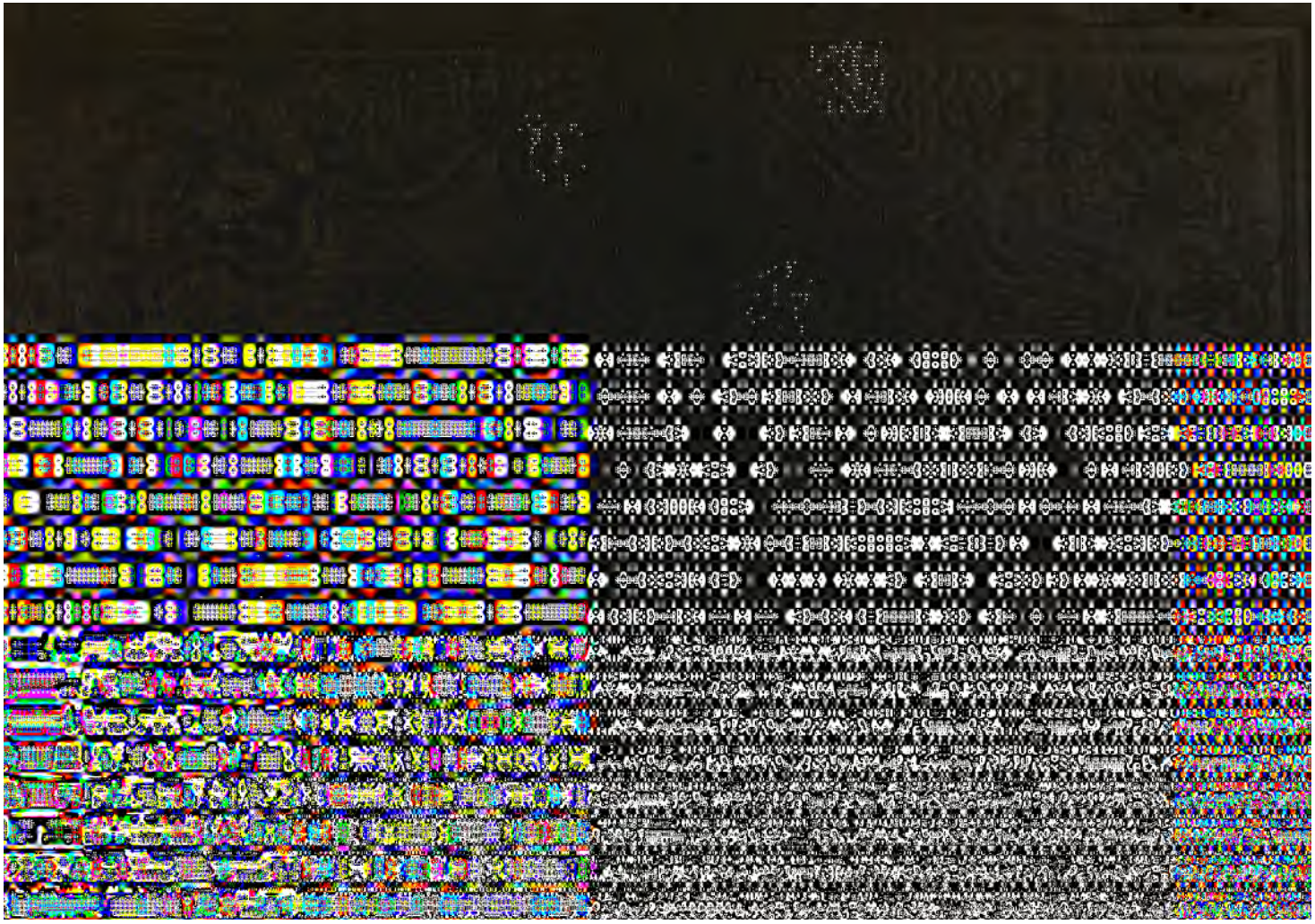

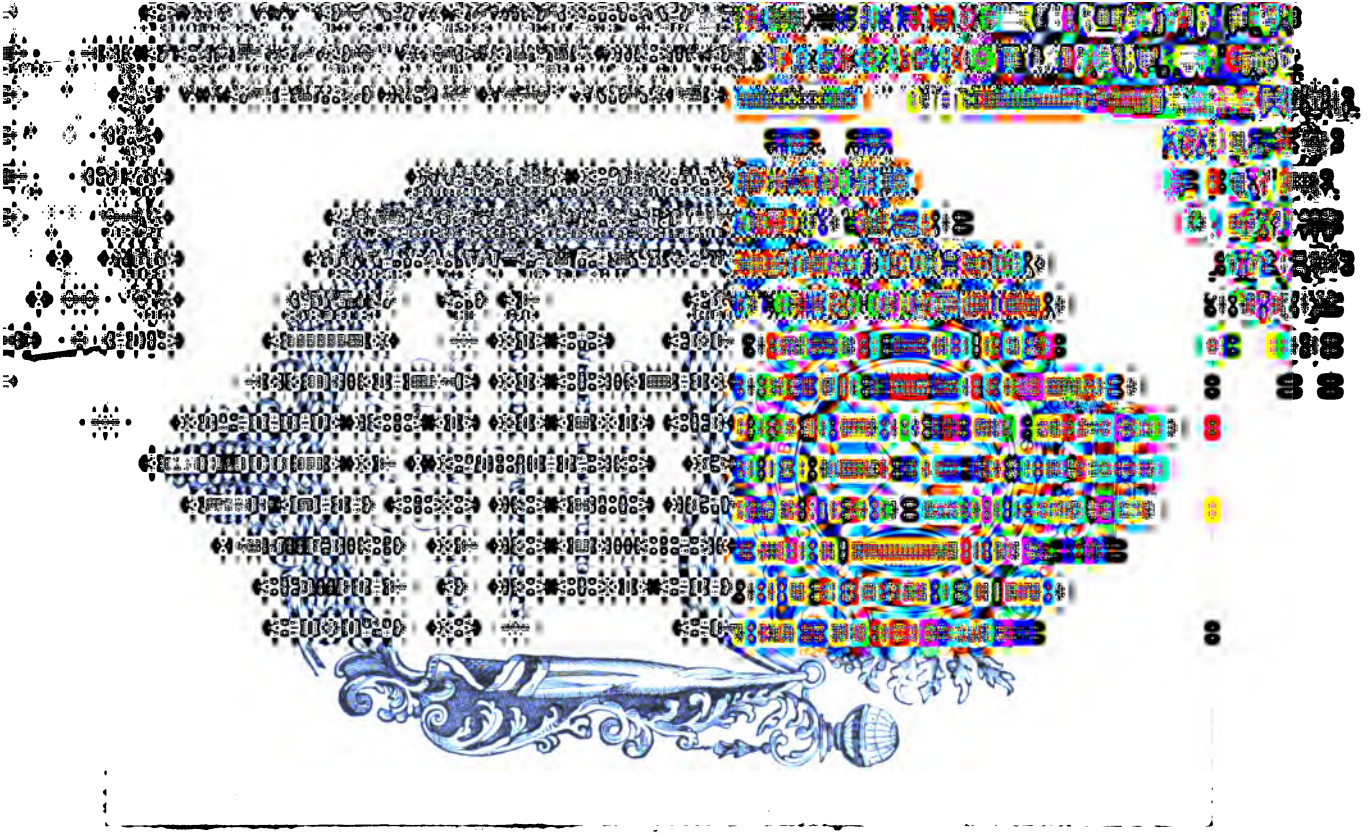

ELLIOTT'S FRUIT BOOK;

OR, THE

American Fruit-Grower's Guide

IN

ORCHARD AND GARDEN.

BEING A COMPEND OF THE HISTORY, MODES OF PROPAGATION, CULTURE, &C., OF FRUIT TREES AND SHRUBS, WITH DESCRIPTIONS OF NEARLY ALL THE VARIETIES OF FRUITS CULTIVATED IN THIS COUNTRY: NOTES OF THEIR ADAPTATION TO LOCALITIES AND SOILS, AND ALSO A COMPLETE LIST OF FRUITS WORTHY OF CULTIVATION.

BY F. R. ELLIOTT.

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TO

PROF. JARED P KIRTLAND,

This Volume is Dedicated,

BY HIS FRIEND,

THE AUTHOR.

PREFACE.

Few objects are more engaging than the culture of fruit. Hope, with all her pleasing fancies, encircles every planter of a fruit tree; while year after year, as it is nurtured and advanced to a bearing state, Hope yet remains entwined with prospective reality; until at last its branches, loaded with ripe, ruddy, delicious fruits, bear out the goddess in sustaining the efforts of man to gratification of taste and feeling, as well as profit pecuniary.

Fortunate is it for the author of a work on fruits in this practical age, that no excuse is required for presenting himself before the public, or crowding upon ground apparently now so fully occupied.

Hazardous as the thought may appear, after so much of matter upon the subject has been prepared and published, minutely, practically, and theoretically explanatory, by such writers as Coxe, Lindley, Downing, Thomas, and others, I yet have imagined there was room for another work; at least it may induce an extended interest in the subject; and in a country so broad of extent—so prolific of fruits and men—composed of such great diversity of soil and climate as ours, there may possibly be garnered some little items that heretofore have escaped the vision of my brother lovers of the subject.

Pleasantly, therefore, during the past ten years, have I been nurturing of trees and noting their products; gradually have I drawn in from the stores of my many friends, the votaries of Pomona, specimens of their skill and trust. These I have carefully examined and compared, and have meted to them in the following pages such award as seemed to me just.

That I have trodden upon the favorites, and therefore the views of some of my friends, I shall not pretend to deny; but that I have so done in aught but a true feeling of interest to the cause, I beg they will not for the moment believe.

Such is the vast variety of garden and orchard fruit—such the diversity of circumstances which affect the growth of trees, the size and qualities of the fruit—such the great number of new sorts, and new modes of treatment discovered, that one book, however carefully prepared, cannot embrace all the knowledge of the subject; but each lover of Pomona and her gifts must cherish and examine, each for himself, relying only on the book as a guide comparative; and looking on the pages of this present, as the result of an intention to create a plain, practical work, to classify and describe fruits in such order, to embody their history, and the best modes of culture, in such manner, that the amateur or extensive orchardist may gather at a glance most of the requisite information to success

The mere test of quality, it is well known, does not render a fruit worthy or unworthy of general cultivation; therefore, the classification of the National Pomological Society was imperfect as a guide to fruit-growers; but by changing or modifying this to first, second, and third class, and explaining in many of the texts descriptive of varieties, the reasons for position given, I trust to have somewhat improved the matter.

New fruits are daily being brought to light; the soils of the West producing them almost spontaneously; the science of the East creating them with rapidity and certainty; pomological meetings and Horticultural Societies are monthly recording and describing them; it is, therefore, generally conceded requisite that some order of classification be carried out, if we expect any limit or bounds to our cause.

The classes adopted in the following pages, corresponding with those of the National Society, have therefore seemed to me well adapted to the end in view. There are some varieties now placed in the second class, that will undoubtedly, when more generally known and distributed, become worthy a place in the first class; but those now placed in the third class, I feel confident will never

advance from their present position, if their friends have reasonable opportunities of comparing them with first-class varieties ripening at the same time. That the number of the first class could now readily be increased, will, I am aware, appear apparent to many pomologists; but, as it already embraces a sufficient number to meet all wants, I have preferred rather to add hereafter, than to retract.

Believing that in fruits, the seeds, cores, and stones are often as, or perhaps more, sure guides to indicate a variety than the outward form, I have made my drawings from specimens of medium size, (discarding both the largest as well as smallest for such purpose,)* representing the appearance of the fruit when halved, except in the cherry, where the pit is shown whole. In my drawings illustrative of form, I have followed the Massachusetts Horticultural Society.

"Of the *descriptions* of fruit, some explanation may be necessary. First, is given the *standard* name in capitals. Below this are placed, in smaller type, the various *synonymes*, or local names, by which the same fruit is known in various countries or parts of the country."

The names of authors previously having described many of the fruits, I have omitted, as not essential to the value of description or fruit, nor necessary to the practical purposes for which I intend the work.

The text descriptive has been, in almost the entire work, made either anew or revised from those already published, with specimens of the fruit before me; and, following the established rules of priority in description, I have (while retaining so much of the original that it may at once be recognized) endeavored to reduce and Americanize. In a few cases I have preferred continuing an erroneous name, because of its being now generally known. Where a description is given written by another, and the fruit not seen by myself, I have endeavored to give, if of importance, the initials of the author, or abbreviation of title of the work from whence such description was drawn, for which see pages 13, 14.

Of the importance of fruit culture, it is deemed superfluous to

* A friend who has carefully examined these drawings and descriptions, says I have represented them all, or nearly all, rather below, than of, medium size

more than remark, that the interest evident in the establishment of journals devoted almost wholly to its cause; the fact that no newspaper is now counted of value without being more or less occupied with matter relating to the orchard; the universal growing desire of every one who has ground of his own to plant thereon trees and vines productive of luscious fruits—all speak volumes illustrative of the extent which the subject holds in the minds of our energetic, ambitious, persevering people.

And here I must be permitted to record my tribute to the memory of A. J. Downing, to whom the pomologists, the fruit-growers, the nation, owe more than to any one man yet existent; by and through whose work on the "Fruits of America," the advocates of nomenclature received the first bold stand, and in a way which has led to extrication of much that was previously in state of confusion; to whose graceful, easy, attractive, yet bold manner of writing, is owing much of the care and attention, culture and embellishment, of and through tree, plant, and flower, of the homes of Americans.

This work has been commenced and completed more at the suggestion and request of friends than from any feeling of my own ability; and, while I have endeavored to avoid error, I yet feel that numerous corrections will have, in subsequent editions, to be made; this, partly, from omission and commission, consequent on one's first work, and partly from the constant state of advancement in pomology. And as it is intended to revise and correct it as soon as the cause demands, I shall consider myself, and the cause, indebted to those gentlemen who in reviewing it may observe errors, if they will communicate the same to me.

To the following gentlemen, who have kindly furnished me with notes, descriptive of their experience, or of varieties or specimens of fruits, by which I have the better been enabled to prepare this work, I sincerely tender my acknowledgments:

In Massachusetts, to Messrs. M. P. Wilder and C. M. Hovey, Boston; Samuel Walker, Roxbury; B. V. French, Braintree; Robert Manning and J. M. Ives, Salem.

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In Michigan, to Daniel Cook, Esq., Jackson.

In Indiana, to Mr. John C. Teas, Raysville.

In Kentucky, to Messrs. H. P. Byram, Louisville; James Allen, Nelson Co.

Doctor J. A. Kennicott, The Grove, Northfield; Adna Williams, Galesbury.

In Wisconsin, to Mr. F. K. Phœnix, Racine.

In Mississippi, to Doctor M. W. Phillips, Log Hall.

F. R. E.

Pomona Gardens, near Cleveland.

ABBREVIATIONS AND BOOKS QUOTED.

Of these we enumerate here those only that we have used most freely in the forming of our pages, either by extract, or as serving for authority to our decisions.

Allen. A practical Treatise on the Culture and Treatment of the Grape Vine. By J. Fisk Allen. 1852.

Arboretum Britannicum, or the Trees and Shrubs of Britain, pictorially and botanically delineated, and scientifically and popularly described, by J. C. Loudon. London, 1845.

Annales de la Société d' Horticulture de Paris. Paris. In monthly Nos. 8vo., from 1827 to 1845.

Adlum. A Memoir on the cultivation of the Vine in America, and the best mode of making Wine. By John Adlum. Washington, 1828.

Buchanan. A treatise on the Grape. By R. Buchanan. Cincinnati, 1852.

Bon Jard. Le Bon Jardinier, pour l'Année 1844. Contenant des principes generaux de culture, etc. Par A. Poiteau et M. Vilmorin. Paris. Yearly volume.

Bridgeman. The Young Gardener's Assistant. By Thomas Bridgeman. Tenth ed. New York, 1844.

Baumann's Cat. Catalogue des Vegetaux en tout genre dispanible dans l'Etablissement des Frères, à Bolwiller, 1842.

Cole. American Fruit Book. By S. W. Cole, 1851.

Coxe. A View of the Cultivation of Fruit Frees in the United States, and of the Management of Orchards and Cider. By William Coxe. Philadelphia, 1817.

Chaptal. Chemistry applied to Agriculture. By John Anthony Chaptal. American ed. Boston, 1835.

Cobbett. The American Gardener. By Wm. Cobbett. London, 1821.

Coleman. Reports on the Agriculture of Massachusetts. By Henry Coleman. Boston, 1840–41.

Cultivator. The Cultivator, a monthly journal of Agriculture, &c., edited by Luther Tucker. Albany, continued to the present time.

Downing. Downing's Fruit and Fruit Trees of America. 1845.

Dom. Gar. The Domestic Gardener's Manual. By John Towers. London, 1839

Duhamel. Traité des Arbres Fruitiers, par M. Duhamel Dumonceau. Paris, 1768, 2 vols.

Dec. Physiologie Végétale, ou Exposition des Forces et des Fonctions vitales des Végétaux. Par A. P. De Candolle. Paris, 1832, 3 vols.

Ernst Mans. Manuscript Notes on Fruits. By A. H. Ernst, Esq., Cincinnati.

Forsyth. A Treatise on the Culture and Management of Fruit Trees. By William Forsyth, 7th ed. London, 1824.

Floy. Lindley's Guide to the Orchard. American ed., with additions by Michael Floy. New York, 1845.

Fessenden. New American Gardener, containing practical directions for the culture of Fruits and Vegetables. By Thos. E. Fessenden. Boston, 1828.

Gard. Mag. The Gardener's Magazine, conducted by J. C. Loudon, in monthly nos., 19 vols. to 1844, London.

Hort. The Horticulturist, a monthly journal of Horticulture, &c. Published by Luther Tucker, and edited by A. J. Downing, from 1846 to 1852, and continued to the present time. By Jas. Wick, jr., publisher, and P. Barrey, ed.

Hoare. A Practical Treatise on the cultivation of the Grape Vine on open walls. By Clement Hoare. London, 1840.

Hort. Soc. Cat. See *Thompson.*

Harris. A Report on the insects of Massachusetts injurious to Vegetation. By Dr. T. W. Harris. Cambridge, 1852.

Hov. Mag. or H. M. The Magazine of Horticulture, Botany, and Rural Affairs. Conducted by C. M. Hovey. Boston, 8vo. monthly nos., 1834 to the present time.

Johnston. Lectures on Agricultural Chemistry and Geology. By Jas. W. F. Johnston. American ed., New York, 2 vols. 1842.

Jard. Fruit. Le Jardin Fruitier, par Louis Noisette. 2 ed. Paris, 1839, 2 vols.

Knight. Various articles in the London Horticultural Society's Transactions. By Thomas Andrew Knight, its late President.

Kenrick or Ken. The new American Orchardist. By William Kenrick, Boston, 1844.

Kollar. A Treatise on Insects injurious to Gardeners, Foresters, and Farmers. By Vincent Kollar ; notes by Westwood. London, 1840, 12mo.

Loudon. An Encyclopedia of Gardening. By J. C. Loudon. London, 1835, 1 thick vol.

———. An Encyclopedia of Plants. By the same. London, 1836, 1 thick vol.

———. An Encyclopedia of Agriculture. By the same. London, 1831, 1 thick vol.

London. Hortus Britannicus. A Catalogue of all the plants in Britain, by the same. London.

———. The Suburban Horticulturist. By the same. London, 1842.

———. The Suburban Gardener and Villa Companion. By the same. London, 1838, 1842.

———. Arboretum et Fruticetum Britannicum. By the same. London, 1838.

Liebig. Organic Chemistry in its application to Agriculture and Physiology. By Justus Liebig. American ed., Cambridge, 1844.

Lind. A Guide to the Orchard and Kitchen Garden, or an account of the Fruits and Vegetables cultivated in Great Britain. By George Lindley. London, 1831.

Lindley. An Introduction to Botany. By John Lindley. London, 1832.

———. An introduction to the Natural System of Botany. By John Lindley. London, 1835, 2d ed.

———. British Fruits. See Pomological Magazine; it is the same work.

———. The Theory of Horticulture, or an attempt to explain the Operation of Gardening upon Physiological Principles. By John Lindley. London, 1840.

———. The same work, with Notes by A. Gray and A. J. Downing. New York, 1841.

L. or Linnæus. Species Plantarum, 5th ed. Berlin, 1810, 5 vols.

Mass. Hort. Society. Transactions of the Massachusetts Horticultural Society. 1842 to the present time.

Man. The New England Fruit Book. By R. Manning, 2d ed. enlarged by John M. Ives, Salem, 1844.

Man. in H. M. Manning's articles in Hovey's Magazine.

Michaux. The North American Sylva, or Descriptions of the Forest Trees of the United States, Canada, &c. By A. F. Michaux. Paris, new edition. Philadelphia, 1852.

M'Intosh. The Orchard and Fruit Garden. By Charles M'Intosh. London, 1819.

N. Y. Trans. Transactions of the New York State Agricultural Society, from 1842 to present time.

Nois. See Jardin Fruitier.

New England Farmer. A weekly periodical, devoted to Agriculture, Horticulture, &c. Boston, continued to the present time.

O. Duh. See Duhamel.

Pom. Mag. or *P. M.* The Pomological Magazine, or Figures and Descriptions of the most important varieties of Fruit cultivated in Great Britain. London, 1828.

Pom. Man. The Pomological Manual. By William R. Prince. New York, 1831, 2 vols.

Prince. A Treatise on the Vine. By William R. Prince. New York, 1830.

Prince. A short Treatise on Horticulture. By William Prince. New York, 1828.

Poit. or Poiteau. Pomologie Française. Recueil des plus beaux Fruits, cultivés en France. Par Poiteau. Paris, 1838, and continued in 4to nos.

Rivers. A Descriptive Catalogue of Pears, cultivated by T. Rivers. Sawbridgeworth.

Ron. or Ronalds. Pyrus Malus Brentfordienses; or, a concise description of Selected Apples, with a figure of each sort. By Hugh Ronalds, London, 1831.

Revue Horticole. Journal des Jardiniers et Amateurs. Audot, Editeur. Paris, 1844, et chaque mois.

Torrey & Gray. A Flora of North America, containing abridged descriptions of all the known plants growing North of the Gulf of Mexico. By John Torrey, M. D., and Asa Gray, M. D., New York.

Thomp. A Catalogue of the Fruits Cultivated in the Garden of the Horticultural Society of London. 3d ed., London, 1845. [Prepared with great care by Robert Thompson, the head of the Fruit Department.]

Thacher. The American Orchardist. By James Thacher, M. D., Boston, 1822.

Wilder, MSS. Manuscript Notes on Fruits. By M. P. Wilder, Esq.

W. D. B. Doct. W. D. Brinckle, in ad interim Reports of Pennsylvania Horticultural Society.

W. R. P. Articles and Descriptions by Wm. R. Prince, in various Horticultural Journals.

Warder Review. Western Horticultural Review. J. A. Warder, editor and publisher. A Monthly Journal of Horticulture, etc. Cincinnati, 1850, to the present time.

Wilder in Hort. Articles and Descriptions written by Hon. M. P. Wilder, and published in Horticulturist.

CHAPTER I.

INTRODUCTORY REMARKS—HISTORY AND ADVANCEMENT OF FRUITS IN OHIO AND THE WEST—VALUE AS FOOD.

A SUBJECT so boundless, in a country of such extent and capacity of soil and climate as ours for the production of all the finer fruits; in a country which, until within a few years, was but a wilderness—a wild, uncultivated tract, now yielding, with the most common, or rather with no care, immense quantities of luscious ripe fruits for transportation to countries where the arts of culture were fully known and understood before we were, filling our store-houses with food, our hearts with gladness, adding to our wealth while contributing to the blessings of others; (for what meets the eye or gladdens the heart more pleasantly than the sight of the perfect fruits of the earth?)—a subject, we say, then so boundless, merits more of enwreathing plaudit than our limits here may allow, though our fancy picture it. Nor have we space, although especially applicable to the practical use of our work, to more than commend the study and practice, in a scientific view, of man to perfection of that depicted in the following stanza:

"The heaven-taught gardener's wondrous skill
Shall wreath the earth with flowers,
While new and luscious fruits shall grow
Throughout her Eden bowers."

As yet the western soils present comparatively little toward the inducement of study and practice; for so freely does every variety of fruit grow, that man has only to plant in order to reap. Soon, however, the grower will learn that skill and care only will reward him with product from his trees—skill, in the thorough understanding of the principles of vegetable physiology; the care and practice, necessary in applying the same.

Rapidly as the West has grown from a tract of country only inhabited by the red man and beasts, to the presenting almost, at this day, of the "Garden of America;" her prairies, her limestone-hills and broad levels; her sandy alluvial bottoms, located in almost as many different climates as positions, abound with all of nature's food, stored for years in the production of tree, fruit, and flower, to

such extent that she may yet be said to be in her infancy. And no one who has not visited and traversed her wide borders—no one reared and trained on soils where four-sixths is rock—can have, but by traveling over it, any conception of the wealth stored up in the soil of the West.

We speak here more of this from believing, that while the East may yield her supplies liberally, attended by the care and expense of supplying fresh food annually, the West will ere long far outstrip all; as she only needs among her sons more study of the nature of plant and tree to bear the palm in producing any fruit.

It is for the West then, more especially, that our work is destined. Although ourself, reared at the East, and all our life familiar with her fruits, her soils and capabilities, we shall yet endeavor to blend the one with the other, that our work may be applicable there as here, even as we cherish at this day our "loved old home," with her rough, rocky surroundings, incentive only to the greater perfection and action of mind; in that, self-dependence is made apparent from day to day.

Before the West was, i. e., settled by white man, the impression prevailed, among other errors connected with fruit culture, that "he who plants pears, plants for his heirs;" and we well recollect being told when a boy, on planting out a young pear-tree, that possibly our children might eat of it, but we, never. Such prophecy, however, failed in our case, as nearly all others, for we have eaten often of it. And now, whether we attribute it to the locomotive age, to the active minds of our eastern brethren, or the spontaneous growth of the West—aided by her industrious denizens—we hardly wait for the season to come around ere we eat of the fruit; our own experience having been to receive trees and plant them in March, and eat of the fruit in November following. Let this be attributable to what it may, such is now the impress, that no one buys a city lot, intending to keep it over one year, but he plants trees upon it, expecting and reaping the fruit thereof.

All this is encouraging; but there is also a dark side in fruit culture gradually coming on us, to be met only by the general diffusion of knowledge on this subject; a knowledge that, as before remarked, will enable us to compete skilfully with deficiencies or over-luxuriance in soil; to know the insects destructive, and their habits, that we may secure our products from their ravages; and a just appreciation of the nature of trees, that we may know how to shape them to the withstanding of our changeful climate.

As under each appropriate head we give somewhat of the olden history of fruits, our remarks here will relate mainly to their introduction and advancement to Ohio and the West. Previous to 1796, there was very little other than the natural fruit of the soil cultivated in Ohio; and not until about 1820 or '22, was there any con-

siderable introduction and planting of "grafted fruits" in the north part of the State. At that time the nursery of William Coxe, Esq., Burlington, New Jersey, seemed the nearest from which to obtain trees; and therefore from thence came most of the first plantations of good fruits. Later, the nurseries of Prince, Kenrick, and Buel, supplied our northern pioneers; and from these, with the liberal hand which always characterizes a fruit culturist, a lover of the Creator's best gifts, grafts were distributed freely to whoever would. As early as 1796 or 1797, Israel Putnam introduced and propagated many of the older and best eastern varieties on the borders of the Ohio river, and there cultivated both trees and fruits, from whence most of the older orchards of southern Ohio, and probably Indiana, were procured. Gov. Worthington, at an early day, 1803, or previous, introduced many fine varieties of fruits into central Ohio. In 1820, Prof. Kirtland imported, from New Jersey to Trumbull County, Ohio, some two hundred sorts of the best fruits then known; and in 1827, or '28 Geo. Hoadley, Esq., sent about one hundred kinds to Cleveland. Alfred Kelly also introduced many fine eastern varieties; and, as before mentioned, grafts from all these were liberally distributed, followed by additional introductions of new varieties, in succeeding years. Add to these, that nearly every pioneer brought with him seeds of the best fruits known in the vicinity of his former residence East, which he planted and grew with care, and we have the heads of the principal introduction of varieties up to about 1832. Since that period, not only have importations of extended varieties been largely made and planted from eastern nurseries, but the nurseries of trees grown for sale have so multiplied in the whole West, that millions of trees are now annually grown and planted.

For the history that follows, relating to Illinois and Wisconsin, we are indebted to the zeal, enthusiasm, and courtesy of Doctor J. A. Kennicott:

"The Grove, Northfield, Cook Co., Illinois,
October, 4, 1853.

"The first permanent settlements in Illinois were made by the French about 1682, in and about Kaskaskia and Cahokia; and it is said, that 'the first generation of fruit trees, there planted, had done good service, and gone the way of all the living,' long before the advent of the present race who people 'Lower Egypt.' The Rev. John M. Peck (whom I quote from memory) affirms, that he ate most luscious fruits, some twenty or thirty years ago, the product of the second generation of these old French trees, even then of almost forest size.

From many sources I gather the fact, that among these old trees were, and still are, perhaps, individuals producing very desirable

fruit; all, doubtless, of mature growth, though some may have been brought from Canada, whence the seeds very evidently came, in their route from the old world.

From this you perceive, that Illinois is one of the oldest fruit-growing states; and it is very certain, that our seedling trees generally yield better fruit than the mass of chance varieties in the East; though, good sooth, I have been unable to trace any of our celebrated varieties in cultivation, to those glorious old trees, so graphically described by the Rev. Mr. Peck; and yet, I am by no means certain, that some of our most valuable local varieties did not originate in that classic fruit-land of Southern Illinois.

It is very probable, also, that, in Central and Northern Illinois there may now be native varieties, surpassing in value a large majority of the sorts named in the books, for local cultivation, at least. Analogy would lead to such a conclusion; for, as a general rule here, of fifty seedling trees, in almost any orchard, at least five will be found worthy of notice, and worth preserving in their natural state, though not desirable for propagation.

From personal observation you are already aware, that some fruits of high repute East, are nearly worthless here; and that others are wonderfully improved by the peculiarities of our soil and climate. It is thought, too, that many old fruits have become so changed as to be no longer easily recognized; and, as their history has been lost, and several local synonyms have been used to designate them, much difficulty and doubt attend our western nomenclature.

Perhaps these difficulties will soon be removed, and the doubts cleared up, as in Ohio, by the re-fruiting of our celebrated varieties East, from scions obtained here, or by further observation on the fructification here, *under the true names.*

Many of our varieties, of the first trees transplanted in western Illinois, and southern Wisconsin, were disseminated by tree pedlars from the region of the Wabash, in Indiana, and central-eastern Illinois; and I am only aware that some of their sorts came from Ohio, and others from Kentucky, Virginia, Tennessee, and North Carolina, and a few, doubtless, from the Eastern States; though what proportion, or what varieties of those brought us by these tree pedlars, I am unable to determine. Very few were sold under EASTERN NAMES, however, and, now and then, a variety is, doubtless, of native origin.

Among these pedlars' trees, the RED JUNE is decidedly the most valuable, and the MILAM the most abundant.

Here-away, I know the origin of four-fifths of the trees planted out in the last ten or twelve years, apart from the pedlars' trees, which continued to arrive up to three or four years ago. The Buffalo nurseries and your Cleveland dealers have furnished the most. The nurseries of Chautauque County sent some early, and the Rochester establishments a great many more recently, and a few ten or twelve

years ago. The Flushing nurseries are also represented in our orchards, and, quite lately, those of Michigan and Northern Indiana; and, in fact, there is scarce an eastern establishment which has not sent trees to the lake region of Illinois and Wisconsin."

Similar to those named, is that of most Western States, in the historic introduction and origin of fruits. Chance seedlings, of value sufficient to retaining of the original tree, are abundant, while those meriting a first place are rare. The character of "very good" will apply to probably one-tenth of the fruit, while that of "best" will hardly apply to one-thousandth.

Of the value of fruits as food, of their free use and tendency to health of system and morality of character, much has been written; but the following, by Doctor Kennicott, sums up all in few words:

"The free use of ripe fruits not only *prevents disease*, but their regulated enjoyment helps to remove that which already exists. All ripe fruits are, also, more or less nutritious. Professsor Salisbury has clearly demonstrated that the APPLE is superior to the POTATO, in the principles that go to increase the muscle and the *brain* of man, and in fattening properties, it is nearly equal, when cooked, for swine, or fed raw to other domestic animals."

Ripe grapes have cured Epidemic dysentery. Physicians have, occasionally, advised the use of "cooling acid fruits;" and the earliest writers have directed the sugary ones, as "figs," for food in convalescence. Families, where fruit is most plentiful and good, and prized as an article of daily food, are most free from disease of all kinds, and more especially from fevers and "bowel complaints." Most fruits aid digestion, some directly, some indirectly, and lessen the desire for alcoholic or stimulating drinks. The juicy ones act as "diluents," and all as "diuretics;" the free acids neutralizing, or rendering soluble the earthy matters in the blood, and carrying them off rapidly through the natural channels.

CHAPTER II.

ORIGINATING OF VARIETIES — THEIR PROPAGATION, BY BUDDING, GRAFTING, LAYERS, CUTTINGS, RUNNERS AND SUCKERS.

"Our garden varieties of fruits are not natural forms. They are the artificial productions of culture. Seedlings from them have always a *tendency to improve*, but they have also another and a stronger *tendency to return to a natural or wild state*." Of this, we have here a strong evidence, in the production of seedling cherries by Prof. Kirtland, where from several hundred grown from seed gathered from the same tree, only about one tenth have surpassed, and two tenths equaled, the parent; the remainder mostly falling back toward the original mazzard.

Most of our choicest varieties cultivated, are from seeds of chance cross-impregnation: few have been the result of artificial skill and care; cross breeding and hybridizing are too often confounded, and while we are constantly in the production of new varieties from *cross breeding*, none are known in fruits from *hybridizing*. Lindley says: "If the pistils of one species be fertilized by the pollen of another species, which may take place in the same genus, or if two distinct varieties of the same species be in like manner intermixed, the seed which results from the operation will be intermediate between its parents, partaking of the qualities of both. In the first case, the progeny is *hybrid* or male; in the second, it is simply *cross-bred*." Although of the same genus, no *hybrid* has ever yet been created between the apple and the pear, or the gooseberry and currant. These cross-breds, when closely resembling the female parent, are termed sub-varieties.

This practice of producing new varieties by cross fertilization was advocated by Thomas Andrew Knight, a distinguished horticulturist of England: while that of Dr. Van Mons of Belgium, was the reproduction of seedlings from seedlings in succession; selecting each time those of the seedlings to procure the seed, which proved the best n the fruit. At the eighth generation, in growing from the pear, his seedlings produced fruit at four years old, while at the commencement it required twelve to fifteen years. This he regarded as the correct course to pursue in the amelioration of varieties; and to this theory, this fruiting at an early stage, according as the parent is far removed from its original state, may we not attribute much of the habits of many of our pears? The Frederic of Wurtemburg,

originating by Prof. Van Mons in this way, it is well known produces its fruit often in the nursery at two years from the bud; while the Dix, a seedling from we know not what variety, requires twelve or fifteen years. This process however, if taken, as by Van Mons, from the commencement, i.e., a wildling, would require a life-time; but our people have all around them seedlings which at an early age are producing fruit; if, therefore, seed be taken from the best of them, and the choicest again selected, it is not probable that more than ten years would elapse to produce something very superior.

On the other hand, the process of Mr. Knight, of producing by crossing, gives the grower the choice of selecting and growing to whatever form, size or character he may desire, and this with an almost absolute certainty of success. This process being fully described by Thomas in his Fruit Culturist, we extract therefrom:

"A familiar instance of cross-impregnation in plants occurs in the Indian corn. The pistillate or seed-bearing flowers covering the young ear, are remotely situated on the plant from the staminate or fertilizing flowers on the summits, or *tassels*. Hence, from this remote position, the pollen or fertilizing dust from the summits may not certainly fall on the ear; and if different sorts grow near, a mixture will probably result. It is well known to farmers, that if different sorts, as white, yellow, and purple, are planted in the same field; or, if common and sweet corn are planted together, each sort no longer remains distinct, but each ear, the second year, is speckled with a promiscuous assemblage of white, yellow, and purple, and of common and sweet corn, of various grades. In fruit trees, the stamens and pistils are in the same flower, and the chances of accidental mixture from other trees, become very small, unless affected by insects, which becoming thickly dusted with powder from one flower, plunge into the recesses of another, and affect a cross-fertilization. Where many varieties grow in one garden, in close proximity, cases of promiscuous intermixture are constantly occurring, which can be developed only by raising fruit from the seedlings.

In the annexed figure of the pear blossom (fig. 1), the five central organs *a*, are the *pistils;* the upper extremity of each is the *stigma*. The surrounding thread-like organs, *b*, are the *stamens*, surmounted by the *anthers*. The anthers are little bags or cases filled with the pollen or fertilizing dust. When the flowers open, the anthers burst, and discharge the pollen on the stigma, which operates on the embryo fruit at its base.

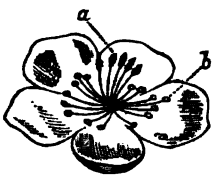


Fig. 1.

The production of new varieties is greatly facilitated by cross-im pregnation, or by fertilizing the pistil of one variety with the pollen of another. This was performed with great success by Knight.

Selecting two varieties, while yet early in flower, and before the anthers had burst and discharged the pollen, he cut out with a fine pair of scissors all the stamens, leaving the pistils untouched (fig. 2). When the stigma became sufficiently mature, which was indicated by its glutinous surface, he transferred the pollen of the other sort, on the point of a camel's-hair pencil. The fruit, thus yielded, was unchanged; but its *seeds* partook variously of the nature of both parents, and the trees growing from them bore new and intermediate varieties.

Fig. 2.

For the success of such experiments, several precautions are requisite. The flower must be deprived of its stamens before it has fully expanded, or before the anthers have already burst and scattered their dust; the pollen must be procured from a bursting or fully matured anther, when it will be dry and powdery; the stigma must be inoculated as soon as it becomes adhesive or glutinous, otherwise it may be fertilized from another source, and then the intended pollen cannot possibly take effect. For a stigma once inoculated, cannot be inoculated again. It is safest, where practicable, to force the trees by artificial heat into flowering a few days earlier than others, so as to be secure from accidental inoculations of pollen floating in the air; and to prevent its spread by bees, to apply a temporary covering of gauze. A want of attention to these minutiæ, has led some experimenters to fancy they had obtained crosses, when they had only natural seedlings."

Budding.—This mechanical process, in connection with that of grafting, layers, and cuttings, is performed for the purpose of increasing the number of trees or plants of any one variety; and is performed on stocks of the same or closely allied species. These are designated under each particular head of Apples, Pears, &c., on other pages. The process and practice is also one, which, although well and truly described in all fruit works and most of the leading journals, is nevertheless too often attended with so much of failure, that while we here repeat descriptions, we at same time advise every new beginner to visit the leading nursery-man or successful amateur grower in his immediate neighborhood, and learn more in half a day from practical example than could be told him were one to write a month. In order to be successful, it is requisite that the stock on which it is intended to operate should be in a thrifty, healthy state, not too early or late in the season, but the best time is usually just when the terminal bud is forming. Various modes of budding are known and described; but that most successful, most rapid, and in common use, is the one termed incorrectly, *American shield budding*, described by Forsyth in 1802—which differs from the

common *shield budding*, only in leaving a small piece of wood at base of the bud inserted, instead of taking all out. An incision is made lengthwise through the bark of the stock, and a small cut at right angles at the top, the whole somewhat resembling the letter T., fig. 3.

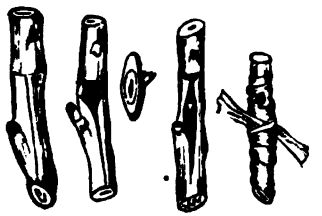


Fig. 3. Fig. 5. Fig. 4. Fig. 6. Fig. 7.

A bud is then taken from a shoot of the present year's growth, by shaving off the bark an inch or an inch and a half in length, with a small part of the wood directly beneath the bud, fig. 4. The edges of the bark, at the incision in the stock, are then raised a little, fig. 5, and the bud pushed downward under the bark, fig. 6. A bandage of bass-bark, woolen-yarn, or other substance, is then wrapped around, commencing at the bottom and passing the bud, returning again and tying just below, covering all but the bud, fig. 7. The pressure should be just sufficient to keep the inserted portion closely to the stock, but not such as to bruise or crush the bark. In about ten days or two weeks after insertion, the strings will require to be loosened, and at expiration of three weeks removed altogether. The ensuing spring, as soon as the buds begin to swell strongly, cut off the stock about six inches above the bud; and as the shoot or bud grows, tie it to the piece of stock above its insertion until about midsummer, when it will be time to cut away the piece of stock above the bud, leaving a sloping cut downward from the top of insertion of bud. An improper practice with some is to place the buds in water; this so saturates them with moisture, that they have no attractive force left to imbibe the sap of the stock, and hence often fail to grow. In cutting the shoot containing buds intended to be inserted, the leaf should immediately be cut off to within half an inch of the bud, otherwise the evaporation will exhaust and injure its vitality. If buds are wanted to be kept a number of days, they should be wrapped in damp moss or wet cloths; or if desired to send any distance, the whole wrapped in oiled silk. In this way they will keep without injury ten days or more.

"*Annular budding* is applicable to trees of hard wood, or thick or rigid bark, as the walnut and magnolia. A ring of bark is removed from the stock, and another corresponding ring, containing the bud, slit open on one side, is made to fit the denuded space. Fig. 8.

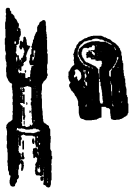


Fig. 8.

"*Trees which have been girdled* in winter by mice, may be preserved by a process similar to annular budding, by cutting away evenly the gnawed portions, and applying one or more pieces of bark peeled from the branch of another tree, so as to restore the con-

nection between the two severed portions. This is done as soon as the bark will separate; the same end may, however, be accomplished early in spring by cutting away portions of the sap-wood with the bark, and connecting the two parts by several pieces of a branch, care being taken that they coincide accurately, as in grafting. The whole, in either case, is then covered with wax."

Grafting, like budding, has numerous modes and forms, all resolving into the same thing—that of transferring one variety on to another. The modes most regarded, and in most common practice, we describe.

Whip or tongue grafting. This is most generally practised when the stock and scion are nearly of equal size. The whole gist of it lays in so forming the graft and stock that the two outer surfaces of albumen, or wood of last year's growth, match one with the other, or if the stock is too large that they match on one side. See fig. 9. The tongue is a notch cut in the stock corresponding with one cut in the graft, and when put together, to serve as support in steadying the graft until the circulation of sap has united it with the stock. This is practised to a large extent by nursery-men on pieces of roots, and is then termed "root-grafting."

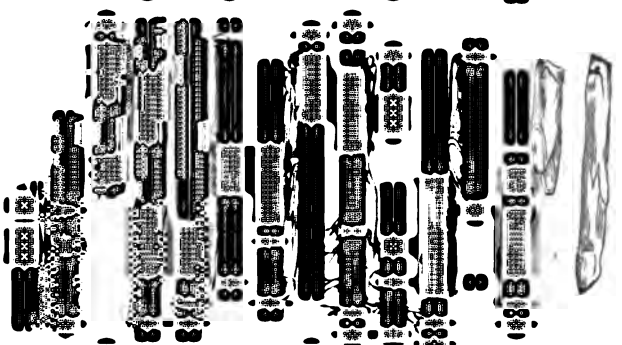
Splice Grafting is similar to tongue grafting, except that no slit is made in either stock or graft. See fig. 10.

Crown Grafting is performed in the same manner, only that it is done on small stocks standing in the ground, at a point near the upper rootlet or fibre. See fig. 11.

Saddle Grafting. In saddle grafting, the stock is pared obilquely on both sides, till it becomes an inverted wedge, and the scion is slit up the centre, when its sides are pared down till they fit the sides of the stock. See fig. 12. This is the best mode to pursue with the cherry and other stone fruits.

Fig. 9.

Side Grafting, as seen in the cut, fig. 9, is performed by cutting a notch or slit of about one inch long in the side of the stock, paring the outer portion, splitting the graft and paring the inner portion, then inserting it so as to give a union of the barks and woods—leaving meanwhile the top o. the stock to carry on the circulation of sap until the graft becomes united, when it is to be cut away. This is the best for the magnolia and for the hickory, ash, &c.; and also when scions may have been received late in the spring, or the work of grafting unavoidably delayed.



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Layers. This is practised in low shrubs and vines, as the quince and grape. It consists in bending down carefully without breaking a branch, cutting a notch or slit on the under side, and pegging it securely, so that the centre will be about four inches under ground, see fig. 14. With the grape trailing the vine on the surface, as shown in fig. 15, and after buds have started a few inches, cover with soil, the vine; each bud will throw out roots, and if the operation be performed in spring, they may be taken up and separated in the fall.

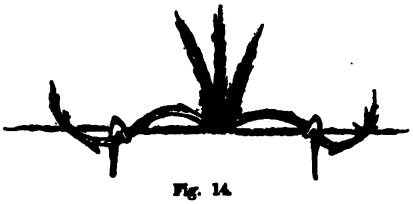


Fig. 14.

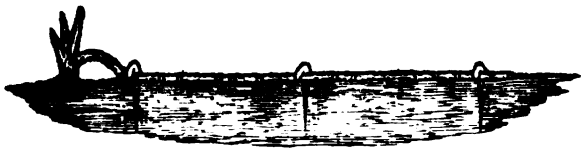


Fig. 15.

Cuttings. Propagation by cuttings is the simplest mode of multiplying a variety. It consists simply in the insertion of a shoot of one year's growth into the soil; the moisture of the soil renews the supply of sap, the buds swell, the leaves expand, and the descending juices expend themselves in the production of new roots, which shoot downwards into the soil, fig. 16. Under ordinary circumstances, or in open ground, this mode is only applicable to such species as readily throw out roots, as the currant, gooseberry, quince, and grape. The cutting should be made from eight inches to a foot long, and have all the lower buds cut out, in order to prevent its throwing up suckers. Wood of the last year's growth is used, and the lower end cut square across at the base of a bud. They should be inserted perpendicularly, or when long enough, curved, as see, under the head of grapes; the earth should be pressed securely at the bottom, and lightly at the top, and when possible, a mulch of two inches of tan bark, saw-dust, etc., thrown over them to preserve moisture.

Fig. 16.

Runners, are the mode of self-propagation in the strawberry; as soon as well rooted they are suited to be removed.

Suckers, are underground runners—often the result of careless cultivation in breaking off roots. They should always be destroyed, but never replanted, not even the Frost Gage plum, proving healthy when so propagated.

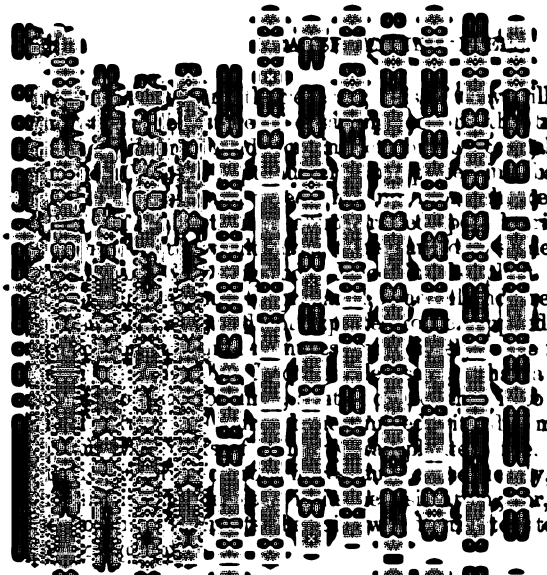
CHAPTER III.

TRANSPLANTING TREES—HOW, WHEN; PACKING, CARE OF WHEN RECEIVED; PRUNING—TIME WHEN, HOW, THE TOPS, THE ROOTS; LABELS FOR; PROTECTION FROM SHEEP, RABBITS, ETC.; TRAINING; FORM OF YOUNG TREES.

NOTWITHSTANDING our people are, as a nation, "planters of trees," yet how few, comparatively, ever succeed in carrying the existence of trees planted, beyond the first season; or if a second year, only with a puny sickly habit, anything but satisfactory. The first thing, in the removal of trees, should be care not to destroy the roots in digging. Small trees are less liable to injury from such cause than large ones, but too often have we seen them wrenched out of the ground, by the strong arm of man, apparently not to injury of roots, but really they were cracked through every portion, and all the pores through which the circulation of sap is had, broken and injured, often as much or more to injury of tree, than if one half the roots had been cut off. Again, have we seen trees cut out with spades, leaving only about four to six inches of main root, and a few small fibres. Such trees require a whole year's nursing, with severe shortening-in of limbs, to recover anything like their native vigor, and are not worth, to the planter, over one-half price of trees well and carefully dug, with roots nearly entire.

Preparing the Soil. If an orchard is to be planted, and on soil retentive of moisture, or, in other words—level clayey soil—it should first be thoroughly subsoiled, at least twenty-two inches deep; it should then have sufficient number of under drains, that no surplus water would ever remain on it over forty-eight hours. Digging deep holes should never be practised, but the whole soil should be made of fine tilth, and if the ground is well drained, or naturally dry, dig broad spaces, four feet diameter, and one foot deep. If the ground is not drained and naturally wet—a location and condition which should never be adopted—let the planting be made by placing the tree on the level ground, and earthing up around it. Upon the level prairies this course has been found most successful, and at times, without even removing the sod beneath the tree.

Many suppose, that a tree grown in nursery on sandy soil, will not



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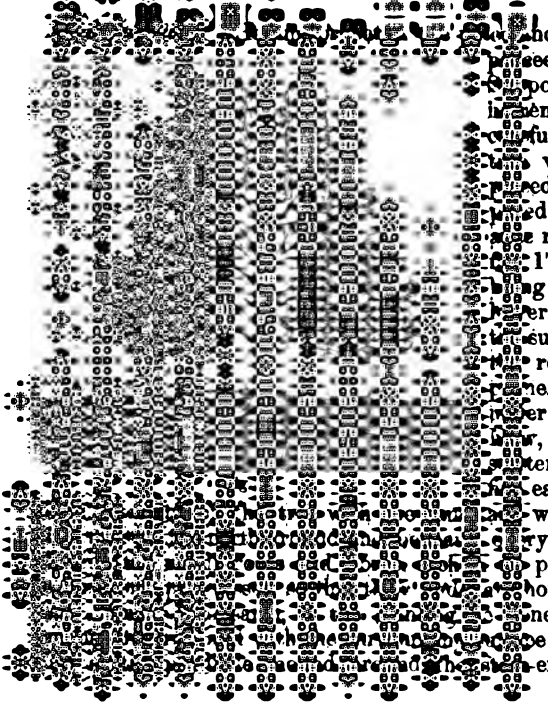

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Time When. With nearly all trees and all locations, Fall is the best time to transplant; new granulations have to be made, ere the roots broken by the process can again supply themselves, or the plant, with food. This process, if trees are removed in Fall, will often be found to have taken place during winter, and ere the exhaustion by the leaves by growth in Spring, of their food laid up in bud and bark the year previous, the roots are again furnishing their support as nature orders. If, however, trees are removed in Spring, it often happens, especially with cherries, that the supply of food previously laid up is exhausted, ere new rootlets are formed. Mulching, and other cares, are often, therefore, more requisite, in order to keep the roots, and prevent too rapid exhaustion in Spring-planted trees, than those of Fall planting.

Packing. Amateurs, as well as nurserymen, often have occasion to forward trees to a distance, and it is desirable they be so packed, as to ensure success when received. In order to this, they should be made into a bundle with damp moss liberally mingled among the roots, the larger trees upon the outside of the bundle, and the small within; band securely with twisted straw bands, then take long straw, lay it down about two inches thick, with its butts near the center of the roots of bundle; lay another layer, with the butts four inches below the tops of the last, and so on, until you have the length of bundle. Now, lay down the bundle, and carefully lay straw over it, in same manner as underneath, only commencing at top, so that when cords are around it, all will be covered; proceed with one end of cord, first lashed to a strong root, to bind it around, once in about ten inches, all the way to the top. If intended to go any considerable distance, with risk of rough handling, a stout stick should be packed in centre of each bundle, extending about four inches beyond the tops of the trees. Next, lay down a strong bass mat, or strong cloth, scatter on it straw, then moss, and placing the roots of bundle upon it, draw it up carefully over, and secure it by strong pack-thread. If moss is not obtainable, let the roots be well puddled, as it is termed, that is, dipped in a thick clayey mud, but avoid packing leaves, grass, etc., among them.

Care of, when received. Trees are often lost by not knowing how to care for them when received after long voyages. If dry, or withered, or frozen, they should be unpacked and immediately buried, roots and tops, underneath the earth, and there left for some days; or, if late in fall, and buried where the water drains off readily, let the roots be buried deep, while the tops have only a couple of inches upon them. Trees received dry in spring, may be immedi-

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knife on it, opposite the lower part of the bud to be cut to, and then make a firm, quick, smooth draw-cut, sloping upwards, so that the knife will come out on a level with the point of the bud, as in fig. 20. In soft-wooded, pithy trees, like the grape vine, for example, half an inch of wood ought to be left above the bud. The cut should also be made, as much as possible, on the lower side of the branch, to prevent rain from lodging in the centre. The position of the bud cut to, is also worthy of consideration in pruning, to produce or modify certain forms. When we wish the new shoot of a lateral branch to take as much as possible, an *upright* direction, we prune to a bud on the *inside;* and if we wish it to *spread*, we choose one on the *outside.* In the annual suppression, or cutting back young trees, to form a stem or side branches, the bud selected to form the leader is chosen on *opposite sides every successive year*, in order to maintain the growth in a straight line. If cut every year to a bud on the same side, it would, in two or three seasons, show an inclination to that side injurious to the symmetry of the tree.

The Removal of Large Branches, where they are to be entirely separated from the tree, is often very clumsily performed. In orchards it is not at all uncommon to see them chopped off with a common axe; and even in gardens there seem to be few persons who either know how, or take the proper care in this matter. They are either cut so that a portion of the base of the branch remains, and sends out vigorous shoots, defeating the objects of the pruning, or they are cut so close that a portion of the wood of the main branch or stem is taken with them, and a wound made that years are required to heal up. Both these extremes ought to be avoided.

The surface of the cut made by the removal of a branch, should, in no case be larger than the base of the branch. Where a branch is united to another, or to the main stem, we notice, both above and below the point of union, a small projection or shoulder, as at the cross line in fig. 21. The knife must enter just below that shoulder, and, by being drawn upwards in a straight line, the base is so completely removed that no shoots can be produced there; and yet the cut surface on the stem is no larger than the base of the branch. When the saw is used, the surface of the cut should be pared smooth with the knife, to prevent water lodging on it, and facilitate the healing of the wound."

Pruning at the time of Transplanting. This is performed, not only to remove bruised and broken roots and branches, but to restore the tree to a proper balance. As trees are ordinarily taken from the ground, the roots are bruised, broken or mutilated, to a greater or less extent. This obviously destroys the natural balance or proportion that existed between the roots and stem, and in such a condition the tree is unable to grow. The demand upon the roots

must, therefore, be lessened, by reducing the stem and branches in length or number, or both; and the more the roots have suffered, the greater must be the reduction of the stem and branches, to bring them to a corresponding condition.

"*Pruning the Roots.* This is practised as well to promote fruitfulness as to lessen the dimensions of trees. The roots are the organs that absorb from the ground the principal food of the tree, and in proportion to their number, size, and activity, other things being equal, are the vigor and growth of the stem and branches. Hence, when a tree is deprived of a certain portion of its roots, its supply of food from the soil is lessened, growth is checked, the sap moves slowly in its channels, is better elaborated in the leaves, and the young branches and buds begin to assume a fruitful character.

Roots are also pruned to prevent them from penetrating too deeply into the earth, and induce the formation of lateral roots near the surface, similar to the cutting back of a stem to produce lateral branches. The principle is the same.

The work is performed by opening a trench around the tree, just at the extremities of the roots: the distance from the tree will, therefore, depend on its size, and the spreading character of the roots. The trench should be the width of a common garden spade, and deep enough to admit of an inspection of all the roots of the tree. If the lateral roots are to be shortened, this is done first. The knife should be placed on the lower side of the root, and the part separated with a clean draw cut, such as would be performed on a branch. If the tree has vertical, or tap roots, they are most easily operated on with a sharp spade, prepared and kept for the purpose. A smart stroke with such a spade, in as nearly a horizontal direction as possible, will separate a pretty strong root. The extent to which root pruning may be performed, depends on the character of the species, the condition of the tree as regards growth, and the object aimed at. Those practising it for the first time should go to work with great caution. It will be better to operate too lightly than too severely. As regards the season, it may be performed either at the end of the first growth, in July or August, or in the autumn or winter, when vegetation is quite suspended. We have operated on cherry trees, with complete success, in August, in a dry time when little growth was going on. At this season, a copious watering should be given after the pruning is performed."

Pruning, to form particular shapes, to promote the formation of blossom buds, to enlarge the fruit, to cure disease, to increase or lessen bulk, are all treated of at length by Loudon and others; but all seems to us summed up in the following, written by M. Dubreuil, in France, and first published in this country in Barry's "Fruit Garden." It is more especially applicable to training of trees in gardens, than of standards in orchards. He says:

"The theory of the pruning of fruit trees rests on the following six general principles:

"1. *The vigor of a tree, subjected to pruning, depends, in a great measure, on the equal distribution of sap in all its branches.*

"In fruit trees abandoned to themselves, the sap is equally distributed in the different parts without any other aid than nature, because the tree assumes the form most in harmony with the natural tendency of the sap.*

"But in those submitted to pruning, it is different; the forms imposed on them, such as espalier, pyramid, vase, &c., change, more or less, the normal direction of the sap, and prevent it from taking the form proper to its species. Thus nearly all the forms given to trees require the development of ramifications, more or less numerous, and of greater or less dimensions at the base of the stem. And, as the sap tends by preference towards the summit of the tree, it happens that, unless great care be taken, the branches at the base become feeble, and finally dry up, and the form intended to be obtained, disappears, to be replaced by the natural form, that is, a stem or a trunk with a branching head. It is then indispensable, if we wish to preserve the form we impose upon trees, to employ certain means, by the aid of which the natural direction of the sap can be changed and directed towards the points where we wish to obtain the most vigorous growth. To do this, we must arrest vegetation in the parts to which the sap is carried in too great abundance, and, on the contrary, favor the parts that do not receive enough. To accomplish this, the following means must be successively employed:

"1. *Prune the branches of the most vigorous parts very short, and those of the weak parts long.* We know that the sap is attracted by the leaves. The removal of a large number of wood-buds from the vigorous parts, deprives these parts of the leaves which these buds would have produced; consequently, the sap is attracted there in less quantities, and the growth thereby diminished. The feeble parts being pruned long, present a great number of buds, which produce a large surface of leaves, and these attract the sap, and acquire a vigorous growth. This principle holds good in all trees, under whatever form they may be conducted.

"2. *Leave a large quantity of fruit on the strong part, and remove the whole or greater part from the feeble.* We know already that the fruit has the property of attracting to it the sap from the roots, and of employing it entirely to its own growth. The necessary result of this is, what we are about to point out, viz., that all the sap which arrives in the strong parts, will be absorbed by the fruit, and the

* This is not in all cases true. Peach trees, we know, left to themselves, exhibit a very striking example of the unequal distribution of the sap. The ends of the branches attract nearly the whole, leaving the lateral shoots and lower parts to die out. In other species, similar instances might be quoted, and, as a general thing, the proposition is unsound, except in a comparative sense.

wood there, in consequence, will make but little growth, while on the feeble parts, deprived of fruit, the sap will all be appropriated by the growing parts, and they will increase in size and strength.

"3. *Bend the strong parts and keep the weak erect.* The more erect the branches and stem are, the greater will be the flow of sap to the growing parts; hence, the feeble parts being erect, attract much more sap than the strong parts inclined, and, consequently, make a more vigorous growth, and soon recover their balance. This remedy is more especially applied to espalier trees.

"4. *Remove from the vigorous parts the superfluous shoots as early in the season as possible, and from the feeble parts as late as possible.* The fewer the number of young shoots there are on a branch, the fewer there are of leaves, and, consequently, the less is the sap attracted there. Hence, in leaving the young shoots on the feeble parts, their leaves attract the sap there, and induce a vigorous growth.

"5. *Pinch early the soft extremities of the shoots on the vigorous parts, and as late as possible on the feeble parts, excepting always any shoots which may be too vigorous for their position.* By thus pinching early the strong parts, the flow of sap to such points is checked, and naturally turns to the growing parts that have not been pinched; this remedy is applicable to trees in all forms.

"6. *Lay in the strong shoots on the trellis early, and leave the feeble parts loose as long as possible.* Laying in the strong parts obstructs the circulation of the sap in them, and, consequently favors the weak parts that are loose. This is only applicable to espaliers.

"7. *In espalier trees, giving the feeble parts the benefit of the light, and confining the strong parts more in the shade, restores a balance,* for light is the agent which enables leaves to perform their functions and their actions on the roots, and the parts receiving the greater proportion of it acquire the most vigorous development.

2. "*The sap acts with greater force and produces more vigorous growth on a branch or shoot pruned short, than on one pruned long.* This is easily explained. The sap acting on two buds must evidently produce a greater development of wood on them, than if it were divided between fifteen or twenty buds.

"It follows from this, that if we wish to obtain wood branches, we prune short, for vigorous shoots produce few fruit buds. On the contrary, if we wish to obtain fruit branches, we prune long, because the most slender or feeble shoots are the most disposed to fruit.

"Another application of this principle is to prune short for a year or two, such trees or parts as have become enfeebled by overbearing. (This principle deserves especial attention, as its application is of great importance.)

3. "*The sap tending always to the extremities of the shoots causes the terminal bud to push with greater vigor than the laterals.* According to this principle, when we wish a prolongment of a stem or

branch, we should prune to a vigorous wood-bud, and leave no production that can interfere with the action of the sap on it.

4. "*The more the sap is obstructed in its circulation, the more likely it will be to produce fruit buds.* This principle is founded on a fact to which we have already had occasion to refer, viz.—that the sap circulating slowly is subjected to a more complete elaboration in the tissues of the tree, and becomes better adapted to the formation of fruit buds.

"This principle can be applied to produce the following result: when we wish to produce fruit buds on a branch, we prevent a free circulation of the sap by bending the branches, or by making annular or circular incisions on it; and on the contrary, when we wish to change a fruit branch into a wood branch, we give it a vertical position, or prune it to two or three buds, on which we concentrate the action of the sap and thus induce their vigorous development.

5. "*The leaves serve to prepare the sap absorbed by the roots for the nourishment of the tree, and aid the formation of buds on the shoots. All trees, therefore, deprived of their leaves are liable to perish.* This principle shows how dangerous it is to remove a large quantity of leaves from trees, under the pretext of aiding the growth or ripening of fruits, for the leaves are the nourishing organs, and the trees deprived of them cannot continue to grow, neither can the fruit; and the branches so stripped will have feeble, ill-formed buds, which will, the following year, produce a weak and sickly growth.

6. "*Where the buds of any shoot or branch do not develop before the age of two years, they can only be forced into activity by a very close pruning, and in some cases, as the peach, this even will often fail.* This last principle shows the importance of pruning the main branches of espaliers particularly, so as to ensure the development of the buds of their successive sections, and to preserve well the side shoots thus produced, for without this, the interior of the tree will become naked and unproductive, and a remedy will be very difficult."

"If these principles and practices of pruning be carefully studied in connection with the habits of growth and bearing of the different fruit trees, pruning will be comparatively an easy matter. The mode of obtaining any particular form or character cannot fail to be perfectly plain and simple; yet no one need hope to accomplish, in all things, the precise results aimed at, for even the most skilful operator is sometimes disappointed; but those who give constant attention to their trees, will always discover a failure in time to apply a remedy."

Training. We give the accompanying fig. 22. taken from "Loudon's Encyclopædia of Gardening" merely as illustrative of the varied modes of training trees in England. Our more favored

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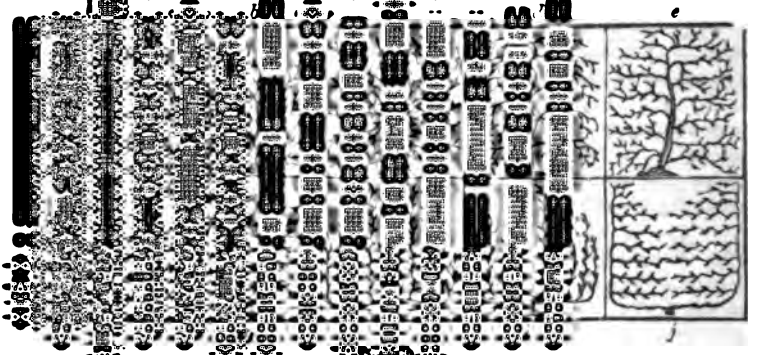

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constant motion from wind, will soon wear off the wire. The wire should be nearly as large as a small knitting-needle, to prevent cracking off by long use. The loop should be large, and pass round a side-shoot, instead of a main branch to prevent the danger of cutting in by the growth of the tree; and should be attached below a small fork, to prevent its blowing off the end of the branch.

The wire may be wholly dispensed with by the following contrivance: cut the zinc into long triangular strips, half an inch wide and six to ten inches long. Draw the narrow or slender end round the twig, bring it through a hole punched mid-way between the ends, and clinch or twist it with the fingers or a small pair of pincers. These labels may be punched by a tinman at a cheap rate.

Sheet tin may be used instead of zinc, using a sharp awl to write the name, and being particular to cut through the tin coating. Oxidation soon renders the letters distinct.

Protection. It often happens that young orchard trees are injured by sheep and rabbits. A simple method for protection, is to take three strips of common lath, set them up around the tree, and with strong wire secure them one to another. If closely placed, they will also serve to protect in a great measure from mice; but for protection from the latter, strong "hardware paper" as it is termed, secured around the tree by fine wire, and coated with coal tar is best.

The form of young trees most desirable to be obtained for planting, are those so grown as to present a regular tapering form of stem from the root to the terminal bud. This is only obtained by permitting the side branches to grow, and be regularly shortened in in the nursery, so that not only the stem but the whole tree presents the form of a pyramid. One tree so grown, is worth more to the planter, than ten grown with long slender stems of uniform size six or seven feet high. A tree rightly (or as first described), grown, will have double the quantity of roots, and when removed will need no staking, while the latter will require staking four or five years, and then never make a fine tree.

CHAPTER IV.

DEGENERACY OF VARIETIES—LIMITED AGE, ETC.— INFLUENCE OF SOILS—CLIMATE—STOCKS.

The theory of degeneracy of varieties at certain periods of existence in the parent-tree, once had strong supporters; but we have never been able to reconcile it with any known laws existent in vegetable life, beyond theory. That all cuttings taken from a seedling plant, no matter how propagated, are but the continuation of a single plant, having existence in a healthy state only so long as the original exists in vigor and health, although advocated, and with considerable of reason to support, is a proposition we cannot accede to. Not only is this adduced as correct, but also that no variety can be procured of a healthy origin except grown on the principle of Van Mons, from seed of a wildling. The failure of varieties to produce fruit on trees of advanced age, and without care, of size equal to its first appearance when the trees were young, is often cited as evidence of the "running out" of that variety; those so citing seeming not to know, that fruit is being produced elsewhere on younger trees, under good treatment, fully equal or surpassing the original. All seedlings are not equally vigorous and healthy, whether grown from a wildling or cultivated variety; and varieties are undoubtedly under propagation unhealthy; but that they are more so on account of the term of years they have been continued, admits of doubt. That every tree has its natural limit of life, and this natural limit shortened or lengthened as the tree is over stimulated or evenly treated, we do not question; but that every bud taken from a tree, propagated in various sections of soil and climate, on seedling stocks, or otherwise, must decay at or near the time of the original tree, is a point of belief to which we have not yet arrived. The white Doyenné Pear, the Pennock Apple, the Golden Pippin, have all been cited as evidence to sustain the theory, and yet we have grown all in as perfect state as could be desired by the most critical.

The influence of soils on both tree and fruit is now too well known among horticulturists, and the exhaustion thereof too often, unwittingly, accepted to support the theory of exhaustion of varieties. We have repeatedly written that, at no very distant day, will it be requisite for the orchardist to fully understand the nature of soil requisite for each distinct variety. We do not believe a fruit originating in soil abundantly supplied with lime will preserve

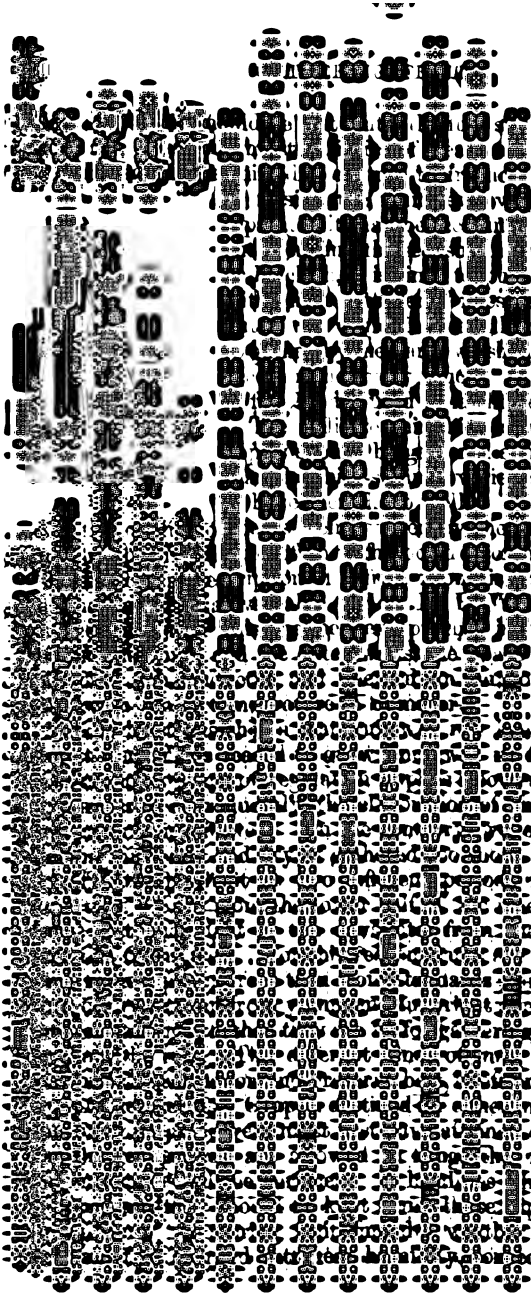
the same character and quality when grown in one utterly devoid of that material. Analysis has shown us somewhat of this, while practical experience is teaching it yearly, in the evidence of rot, &c., exhibited in varieties grown on trees long unsupplied with aught but the natural ingredients of the soil. As under the head of each variety of fruit we give the analysis belonging thereto, we shall not extend remarks here on a subject too well understood and accepted to require argument in its support. The influence of climate on varieties has, we think, only this effect, viz.: to create more or less rapid growth of both tree and fruit as we go north or south, causing in the tree a coarser, more spongy, soft wood, and more subject to injury from sudden changes of atmosphere, when grown south; and in the fruit, greater size, more open and coarser texture of flesh, and corresponding depreciation in flavor, with earlier maturity in apple and pear; but in the peach, apricot, and nectarine, additional character and sweetness, as the juices are more elaborated.

The influence of Stocks on varieties seems one not easily explained; for while all know that to propagate a strong growing variety upon a slow growing stock has a tendency at once to reduce its growth of wood and create a producing habit; and *vice versa*, when a slow grower is placed on one of vigorous habit. Yet the reason why a fruit is better or worse in quality when grown on varied stocks and subject to like soil, has not been explained. Seedling stocks, as most used by nursery-men, are not all alike vigorous or hardy; hence the apparent difference in trees propagated on them and removed to various locations. Under each general head of varieties of fruits, we give such information as we have been enabled to gain of the adaptation of certain stocks to the variety, and refer thereto for further remark.

CHAPTER V.

GATHERING FRUIT—TIME WHEN—FRUIT-ROOM FOR KEEPING AND RIPENING.

The gathering of hardy fruits, such as apples, pears, quinces, grapes, etc., should be performed in the middle of a dry day, not in the morning before the dew is evaporated, nor in evening when it is depositing; neither should they be gathered immediately after a



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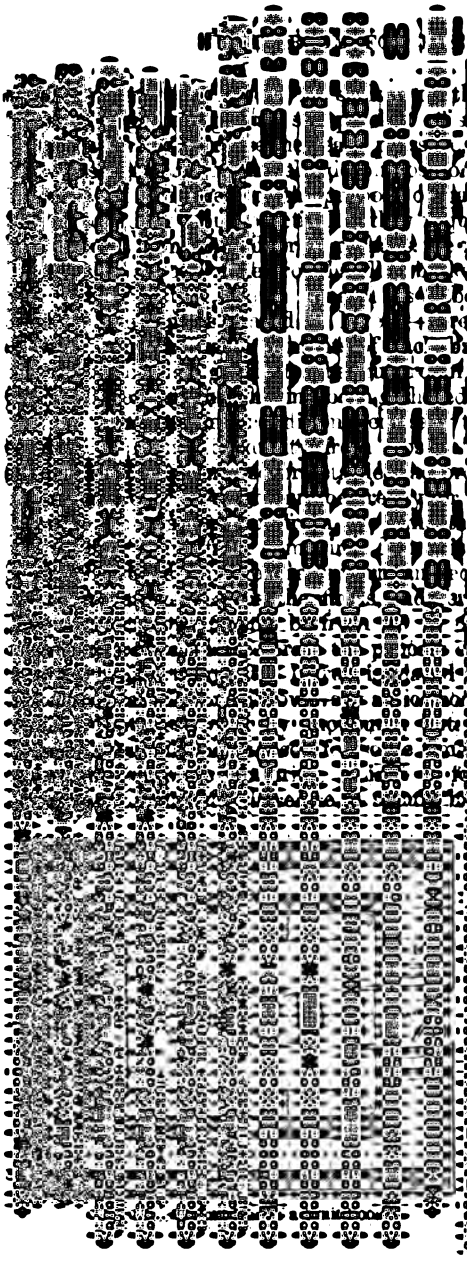

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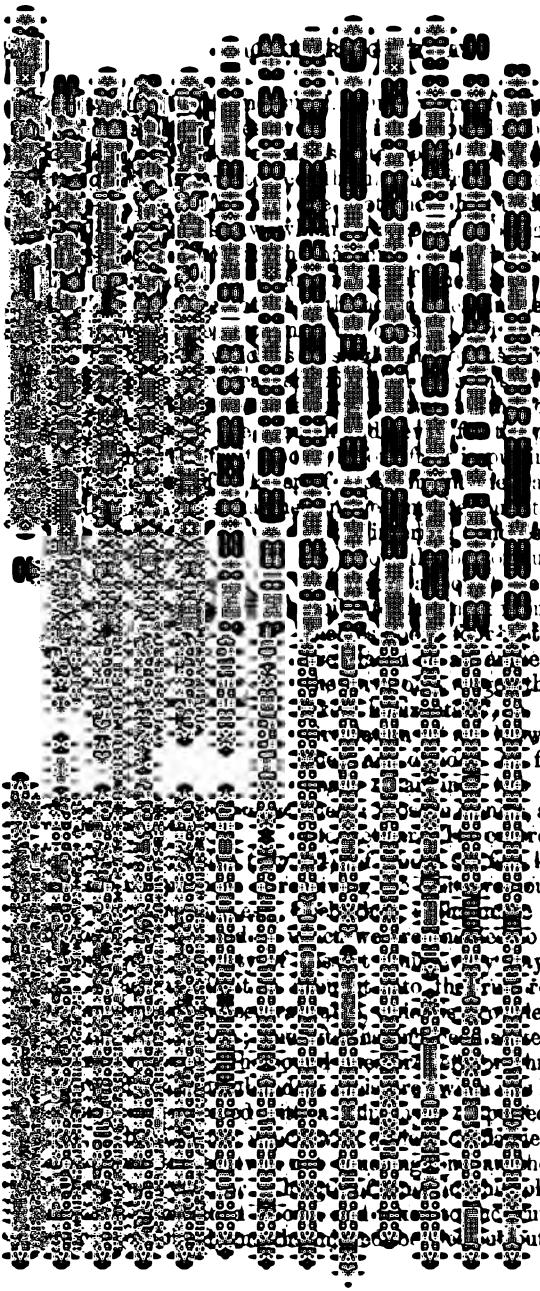

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Fig. 26. Method of suspending clusters of Grapes.

pair of scissors, and fixed the reverse way to a metalic hook, of the form of an S, (*fig.* 26.) Attached thus, they are less likely to rot, because the berries are placed in a freer position, and do not touch each other. They are hooked to one or two hoops, as shown at *fig.* 27, and suspended with a cord

Fig. 27. Movable frame for suspending the Grapes.

cord to the ceiling, and made movable with two pulleys. Having thus all the fruit disposed in the fruit room, the doors and shutters are opened during eight or ten days, to deprive the fruit of the superabundant moisture; and after this has been done, a fine dry day is chosen to close the fruit room hermetically. The doors are no more opened, except for the work necessary to be done in the interior. Until now, no other mode was known of drying-up superabundant moisture in fruit rooms during winter, except by permitting a greater or less current of air to pass through the apartment. The inconveniences this plan presents are obvious; the interior temperature will change according to the exterior; and, bad as this plan is, if the thermometer stands under freezing point, no use can be made of it at all; hence, the fruit must be abandoned to chance, and disappointment will soon follow. In this case we recommend the use of chlorine of calcium. This substance has the property of absorbing about double its own weight of moisture, when it becomes liquid after being exposed for a certain length of time to a humid atmosphere, produced by the moisture emitted by the fruit. It is thus suited to maintain the atmosphere in the best condition.

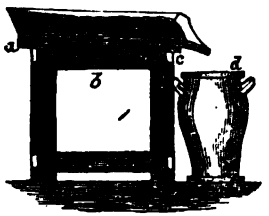


Fig. 28. Box for using the Chlorine of Calcium.

To use chlorine of calcium, a wooden box is made (*fig.* 28, *a*,) one foot and a half square by three inches deep, and placed upon a table *b*, which is at the side, *c*, an inch lower than on the other. The chlorine of calcium, after having absorbed a certain quantity of moisture, becomes liquefied, and runs into the earthenware vase, *d*, placed underneath for the purpose. Should the chlorine become dissolved before the total consumption of the fruits, the dose must be renewed; in which case, the liquid in the vase, if put in a pan, and

placed above the fire, becomes again chlorine of calcium, and as good for use as before.

Fruit in Cellars.—"A great deal of winter fruit suffers early decay, in consequence of a deficiency of ventilation, especially during autumn, and after the fruit is deposited. Another cause of decay, is the improper location of the shelves or bins, which are placed against or around the walls. By this inconvenient arrangement, the assorting of decayed specimens must be done all from one side, and the shelves must hence be very narrow, or the operator must stretch himself in a most irksome horizontal position. The circulation of the air is, at the same time, greatly impeded by the want of space next the walls. To avoid these evils, the shelves should be in the centre, with a passage all round. This allows circulation of air; and the shelves may be twice the width, with the same conveniences in assorting or picking. If suspended from the joists above, on stiff bars, rats cannot reach them. It is said, that the Germans are very successful in the ventilation of their cellars, by a communication with the principal chimney, the heated air in which necessarily maintains a current, which sweeps out the noxious and stagnant gases from the vegetable and other contents."

THE ALMOND.

Amygdalus communis—Dec. *Rosacea of* Botanists.

The almond tree is a native of the north of Africa; of the mountains of Asia; and, of Russia. Linnaeus places it in the same genus with the peach and nectarine, and many botanists regard it as the parent of both. The fruit of almond, peach, and nectarine, it is said, have been found growing naturally upon the same branch. How true this may have been, when so recorded, we do not know, but we do know, that nature produces no such variations in the present age. The tree bears a general resemblance to the nectarine, but is easily distinguished by its more glossy leaves, and the peculiar color and hardness of the wood. The flowers resemble those of the peach, but are larger than most varieties, and produced in greater profusion. It is a fruit which has been too much neglected, and especially in our south-western States, where it should be grown in such quantities, as to entirely exclude importation from Europe.

Propagation. Easily grown from seed, which should be placed in sand, kept moist during winter, cracked in spring, and sown in drills three feet wide, and one pit every eight inches in the drill, covered two inches deep. Varieties are continued by budding on the wild plum (which is best) the peach and almond. In light soils, the peach answers a very good purpose, but for strong, rich soils, the plum is best.

Soil, Hardihood, and Cultivation. The soil should be well drained; but in our clear, sunny clime, a warm, sandy soil is not essential. The long, hard shell variety is hardy, and productive in the middle, and portions of the northern States; while South, the soft shell, or ladies' almond, is grown without difficulty. The cultivation needed is same as that of the peach.

Uses. The kernel of the sweet almond is esteemed as an article of food, and used in confectionery, cookery, and perfumery. Bitter almonds are used in medicine, furnishing somewhat of the prussic acid of the shops.

VARIETIES.

CLASS I. *Varieties worthy cultivation.*

Long Hard Shell.

Long Hard Shell Almond, | Amandier a gros fruit, | Amandier a gros fruit doux.

Flowers, large, pale rose color, opening before the leaves; *stone*, about as large as the soft shell, but the kernel larger and plumper; very hardy; ripens about last September.

Languedoc.

Great-fruited sweet, | Great Soft Shell, | Large Persian

The trees are hardy, but its fruiting qualities we do not know It is said to be very large and sweet.

Soft Shell Sweet.

Soft Shell Sweet Almond, | Ladies' Thin Shell,
Doux a coque tendre, | Sultan a coque tendre,
Amandier a coque tendre, | Amandier des Dames,
Ou Amande Princesse.

This is the variety common in the shops of the confectioners, wtih a shell so thin as to be easily crushed between the fingers; and the kernel of which is so generally esteemed at the dessert. The flowers open at same time with the leaves, and are deeply tinged with red. *Fruit*, oval, compressed; *nut*, oval-pointed, one-sided, tender shell; *kernel*, sweet; ripens in August, or in July at the South, where it is only adapted.

CLASS III. *Varieties unworthy Cultare.*

Common Almond.

Common Sweet, | Amandier a petit Fruit, | Amande Commune.

A variety usually found in nurseries, inferior to the Long Hard Shell.

Sultana Sweet Almond.

Amande Sultane, | Sultan.

A tender-shelled variety, inferior to the Soft Shelled Sweet.

Pistachia Sweet.

Amande Pistache.

Small, pointed, inferior fruit.

Peach Almond.

Pecher, | Amandier Pecher.

A cross between the Peach and Almond. Nearly sweet—often bitter.

Bitter Almond.

Differing from the common Almond in its bitter kernel.

THE APRICOT.

Armeniaca vulgaris—Dec. *Rosaca* of Botanists.

The common apricot is a fruit tree in occasional, but not general cultivation. It is of olden date, having been mentioned by Columella, and, afterward, by Pliny and Dioscorides. The latter describes it as known in Italy under the name *præcoci·s;* while the former mentions, that it was introduced into that country about the sixteenth year of the Christian era. Thunberg describes it as abounding in Japan, and attaining the size of a large spreading tree. "The Chinese," says Grossier, "have many varieties, which they cultivate both for ornament and use." The barren mountains west of Pekin, are described by the same author, as being covered with these trees. And Professor Pallas states it to be "a native of almost the whole range of the Caucasus." It is, also, stated to be from Armenia and Arabia, and its name, derived from the Arabic, *berkoche*, whence the Tuscan, *bacoche* or *albicocco*, and the English, *apricock*, and, finally, apricot, about the end of the last century. Coxe, in his work, published in 1817, says of the apricot, "This fruit is extremely tender, in our severe winters in exposed or open situations, unprotected by a wall." And similar statements have been made by writers, from time to time, until, on account of this erroneous impression, of late years, its cultivation has been too much neglected. It is not more tender as a tree than our sweet cherries; and, contrary to general statements, they do not require sheltered southern positions; for in climates like ours, such situations are the most objectionable, tending suddenly to excite or check the circulation of sap, expanding and breaking the tissue of liber, often destroying the tree in an hour, during the months of February or March, although not, perhaps, apparent, until the flow of sap commences returning toward the root, in June or July following. Northern or eastern exposures are best, but, in southern or western positions, shielding the bodies and lower limbs with cotton cloth dipped in whitewash, will often act as a preventive. The trees should be shortened-in "freely, as with the peach; and standards should always be grown more in manner of round-headed dwarfs, than otherwise; for if so grown, injury to the fruit from late spring frosts, can often be prevented, by covering them with a cloth.

Propagation. The apricot is generally propagated by budding

on the plum. The small, yellow wild plum of our Western States makes one of the best stocks for it. Some use the peach, which answers very well on light, sandy soils, but generally gives too much tendency to wood growth rather than producing fruit. The seeds grow readily, and pits from isolated trees often produce very good sorts; few, however, ever get into notice, from not surpassing the parent in size, although often proving more hardy and productive. Budding into the limbs of a standard peach, or plum-tree, has been thought to add hardihood to the apricot.

Soil and Diseases. Deep, strong, loamy, but not wet soils, are best adapted to successful fruiting the apricot; although they are often grown readily and beautifully on light sand. In the latter case, however, it requires mulching or free watering, otherwise the tree ripens its wood and drops its fruit before fully matured.

The diseases belonging to the apricot as a tree are only the result of exposure, as stated previously; but the fruit is a favorite of the curculio, and frequently destroyed ere half grown. Trees trained against buildings and near walks are often exempt from attacks of this insect.

Uses. "A very handsome and delicious dessert fruit, only inferior to the peach, ripening about midsummer, after cherries and before plums, at a season when it is peculiarly acceptable. For preserving in sugar or brandy, for jellies or pastries, it is highly esteemed, and, where it is abundant, an admirable liquor is made from the fruit; it is also dried for winter use." It is also used, when partially grown, in the preparation of tarts.

VARIETIES.

CLASS I. *Worthy General Cultivation.*

Breda.

Amande Aveline, | Ananas,
De Hollande, | Persique,
Haselnussmandel.

This old variety withstands severe frosts in spring, is hardy as a tree, a good grower, productive although small, and hangs well, even after ripe. *Fruit*, small, roundish, often approaching four-sided; suture, well marked; *skin*, orange, becoming rich brownish orange in the sun; *flesh*, deep orange, parting freely from the stone, juicy, rich, and high-flavored; *stone*, small, roundish, compressed; *kernel*, sweet. *Season*, first of August.

Early Golden.

Dubois' Early Golden, | Dubois' Early Golden Apricot.

Raised by Charles Dubois, Fishkill Landing, N. Y. Tree, thrifty yet close wood, hardy, productive, and said to bear considerable of late frosts without injury to the blossom.

Fruit, small, one and a quarter inch diameter, roundish oval, narrow suture; *skin*, smooth, pale orange; *flesh*, orange, moderately juicy and sweet, but not high flavor; separates from the stone; *kernel*, sweet. *Season*, 10th to 15th July. Very valuable as a market variety.

Large Early.

Gros Precoce, | De St. Jean Rouge,
De St. Jean, | Gros D'Alexandrie,
Gros Freche.

This proves to be the finest large early apricot known, and an abundant bearer: foliage, large, leaves, tapering toward the footstalks, with little ear-like appendages in place of glands.

Fruit, medium size, oblong compressed; *suture*, deep; *skin*, downy, pale orange in the shade; fine bright orange with a few ruddy spots in the sun; *flesh*, pale orange, rich, juicy, separates freely from the stone; *stone*, brown, much flattened, oval, perforated along the back from base to apex; *kernel*, bitter. *Season*, 10th to 15th July.

Moorpark.

Anson's, | Temple's,
Dunmore, | Dunmore's Breda,
Sudlow's Moorpark, | Hunt's Moorpark,
Oldaker's Moorpark, | Walton Moorpark,
De Nancy, | Peach,
Anson's Imperial, | Royal Peach,
Peche, | Abricot Peche,
Peche Gros, | Wurtemburg.

This variety has its name from Moorpark, the seat of Sir William Temple, who began gardening in England about 1672, and previous to his decease, in 1698, this variety was cultivated. Moderate bearer. *Fruit*, large, roundish, about two and a quarter inches diameter each way, larger on one side of the suture than the other; *skin*, orange in the shade, but deep orange or brownish red in the sun, marked with numerous carmine specks and dots; *flesh*, firm, bright orange, parting free from the stone, quite juicy, with a rich and luscious flavor; *stone*, uneven, peculiarly perforated along the back

where a pin may be pushed through nearly from one end to the other; *kernel*, bitter. *Season*, early in August.

We have been unable to detect any difference between the Moorpark and Peach apricot, and have therefore made the Peach a synonym of Moorpark.

CLASS II. *Adapted to certain Localities; or, Gardens of Amateurs. New and untested.*

Burlington.

This variety originated at Burlington, N. J., from a seed of the Peach Apricot planted by Mrs. Sarah Woolman in 1838. Native soil, poor gravel. Tree, vigorous, young wood reddish. Fruit, medium size, oblong, somewhat compressed at sides, with distinct suture; skin, golden yellow, with red spots, and a ruddy cheek in sun; flesh, yellowish, juicy, fine flavor; stone, rough, perforated. Season, last of July.

Brown's Early.

Origin Chelsea, Mass. Fruit, large, short oval, yellow, bright red cheek; flesh, yellow, melting, rich, juicy, luscious flavor. Season, middle to last July.

Hemskirke.

A foreign variety, ripening at same time as the Peach Apricot. Tree very short jointed wood. Fruit, above medium, roundish, compressed; skin, orange, with a brownish red cheek; flesh, bright clear orange, tender, juicy, rich flavor; stone, small; kernel, partially bitter. Season, last of July.

Kaisha.

From Syria, new, and but recently introduced into this country. The Journal of the London Horticultural Society, describes it as "roundish, semi-transparent, skin slightly downy, pale citron color in shade, tinged, and marked with red in sun. Flesh, tender, juicy, citron color, sugary and delicious, parting freely from the stone, which is small roundish, with a sweet kernel."

Large Red.

Under this name we received a tree three years since, but it has not yet fruited. Mr. Downing, in the Horticulturist, speaks of it as large, round, dark orange red, sweet, and juicy.

Musch.

Musch Musch, | D' Alexandrie,
Gros Musch.

This variety takes its name from the city of Musch, on the frontiers

of Turkey in Asia. The Moorpark is often sent out for this variety; and so, receiving it from three different sources, we for a long time supposed them identical. The true variety is not of quite as strong growth as Moorpark, wood being very short jointed. Fruit, medium, roundish, about one and a half inch in diameter; skin, rich yellow, with orange red spots and marblings on the sunny side; flesh, yellow, tender, melting, sweet; kernel, sweet. Season, last of July.

Newhall's Early.

Origin, Lynn, Mass. Fruit, medium, short, oval, bright orange, deep red cheek, tender, juicy, rich delicious flavor; clingstone; season, last July, early in August. (Cole.)

Roman.

Abricot Commun, Germine, | Grosse Germine, Transparent.

A strong grower, hardy tree, suited to cold unfavorable situations; good bearer; poor flavor. Fruit, medium, oblong, compressed, pale yellow, dotted with a few red spots; flesh, dull yellow, soft, dry; stone, oblong; kernel, bitter; season, first August.

Royal.

Abricot Royale.

A French variety, with large leaves, and vigorous habit of growth. Fruit, above medium, roundish oval, slightly compressed, dull yellow, with a little red; flesh, pale orange, firm and juicy; last of July.

Shipley's.

Shipley's Large, | Blenheim.

From England, a good grower, and productive. Fruit, large, oval, orange yellow, juicy, sweet; kernel, bitter; season, last July.

Shaker Para.

A variety not yet, to our knowledge, introduced. We have only seen it noticed in the journal of the London Hort. Society. Its name, meaning "bit of sugar," is the only description given.

Turkey.

Large Turkey, | De Nancy.

Fruit, medium, round, deep yellow in the shade, mottled with brownish orange in the sun; flesh, pale yellow, firm, juicy; kernel, sweet; season, middle August.

The Blotched Leaved Turkey, or Gold Blotched, is a sub-variety, in all respects resembling the common Turkey, except having most of the leaves more or less blotched with yellow.

CLASS III. *Varieties unworthy farther Culture.*

Alberge.

Albergier.

Fruit, small, roundish, yellow, flesh, firm, vinous. Middle of August.

Brussels.

Fruit, medium, oval, compressed, pale yellow, with dark brown specks; flesh, yellow, firm, brisk flavor. Middle of August. Kernel, bitter.

Black.

Purple, Angoumois, | Noir, Violet,
Du Pape.

Fruit, small, resembling a plum, round, reddish violet, or purple; flesh, tender, juicy, adhering to the stone, astringent; kernel, sweet. August. George Hoadley, Esq., informs us that this variety has been brought from Germany under name of "Hamburgh Apricot," probably from Booth's nursery, near Hamburgh.

Orange.

Early Orange, Royal Orange, | Royal George, Persian,
Royal Persian.

Fruit, medium, roundish, orange color, with a ruddy tint in the sun; flesh, dark orange, dry, insipid; kernel, sweet. Middle July.

Red Masculine.

Early Masculine, Brown Masculine, | Abricot Precoce, Abricotier Hatif,
Abricotier.

Fruit, small, round, yellow, spotted with dark red on the sunny side; flesh, yellow, poor flavor; kernel, bitter. Season, middle July.

White Masculine.

White Apricot, Abricot Blanc, | Abricotier Blanc, Early White Masculine,
White Algiers.

Differing from the above only in its color, and ripening a few days later.

THE APPLE.

Pyrus Malus, L.—Rosacea of Botanists.

Of all fruits natural to temperate climates the apple has ever had preference. The "crafte of graftynge, alterynge, and plantynge of fruits," was written on by a British writer in 1502, but it had then long received the attention of "wise men of the East," and had arrived to all the perfection of the present day; the art of producing and propagating varieties, probably, being then as well understood as now, except however, as compared to the population, by a less number of persons. A native, in its wild state, of this country and of Europe, it is generally understood, that, from the variety *pyrus malus* of Lindley, our cultivated sorts have originated. Twenty-two varieties are the number first mentioned and named by Roman writers; these have increased, until now probably 2000 would not include the whole number named and partially or wholly described.

To the labors of Thompson, Downing, Thomas and others, as well as of local and national Pomological Societies, we owe much in aid toward winnowing from this immense number, the wheat from the chaff; and yet such is the extent of our country, and the habit of all our pioneer settlers to sow seeds of the best apples, that we are yearly in the production of vast numbers of new seedlings, adapted mainly only to their own locality, but occasionally of such excellence as to warrant their general introduction. It is owing to this, that, notwithstanding pomological writers are daily condemning, our list of esteemed varieties is constantly swelling, to the almost utter confounding of the seeker after a knowledge relative to "what varieties to plant."

Orcharding in its profits pecuniary, as relating to the apple, has become well understood, and no one, who has land in any way suited now hesitates to plant. We have no certain data, but think we do not overstate when we say, that, besides large quantities imported from Eastern States, there are propagated and planted annually over 6,000,000 trees in the States of Ohio, Michigan, Indiana, Illinois, and Wisconsin. The Western country is already producing by millions of bushels, and her "orchards," so to speak, are not yet planted. Such is the value placed on fruit, such the rapid increase of people in cities, that no one should be at all deterred

from continued planting; for, we have not only the wants of increased population of our own land to supply, but that of foreign countries. Already our fruits are sent to England and other distant shores, and eagerly sought for and purchased at what would here be termed high prices. Although the Newtown pippin as sent from the Pell orchard on the Hudson River, has done much toward establishing our reputation abroad, we anticipate an advance in good-favor, when the same variety grown on our Southern Ohio, Kentucky, Indiana and Illinois soils, shall be shown; for certainly they are, like all our Western growths, when compared with those of the East, far superior in size.

The duration of the apple when worked and grown on a healthy seedling stock, was regarded by Mr. Knight, of celebrity in horticulture, at 200 years; yet trees are recorded as being over 1000 years old, and in annual healthy fruiting condition. So also Mr. Knight regarded "many varieties" as in his time "already on the decline," which Coxe, in his "View of Fruit Trees" published in 1817, says "grow and appear more healthy than any variety in the orchard." Trees of over 200 years are known, in this country, to be healthy and yearly producing their abundance of fine fair fruit.

The puberty or fruit bearing age of the apple tree varies according to variety, climate, and cultivation. In the rich deep soils, and under the clear sun of our western states, most varieties come into bearing at about eight years from the bud; or about four or five years from planting out. We speak here only of the cultivated varieties. Wild seedlings would probably require from twelve to fifteen years.

Propagation—By seeds. These should be selected if intended for stocks to work varieties upon, from native seedling trees of strong, vigorous, healthy growth. The common practice is to visit a cider mill in the months of October or November and take therefrom indiscriminately such as first come to hand; but he who desires to grow fine healthy trees had much better purchase the apples from such trees as we describe, and, if he choose, take them to the press himself. The seed should be entirely separated from the pumice or pulp, although much of it will grow if spread immediately on the land thinly and plowed in lightly; but this is a coarse unworkmanlike method. To free it from the pulp, take a coarse sieve, and after it has lain upon boards for forty-eight hours, proceed to sift it; the next process, is washing in tubs, when most of the pulp which passed through the sieve will rise to the top of the water and may be taken off. If the ground is ready it may now be sown, the ground being made rich in vegetable, or partially mixed with *well rotted* animal manure, trenched or plowed twenty inches deep; sow the seed in drills of about one foot wide and two feet between each drill; scatter the

seed so that when it grows there will be one plant to every two inches and cover with about one inch of earth, and one inch of leaf mould, or tan bark, or sawdust. Fresh raw manure induces insects, and consequently diseased roots. If the seed is intended for shipment or keeping over until the spring planting, boxes not over six inches deep should be procured with holes made in the bottom for drainage, and then the seed packed in shallow layers with sand or moss, and placed in the open air on the *north* side of some building or fence.

By Grafting. All of the modes described in previous pages are used in propagating the apple. Seedling stocks of diameter at crown of from one quarter to three-eighths inch are the best; these are generally obtained from seedlings of one year's growth in our rich western soils; they should be dug up, have their side roots trimmed to within one inch of the main root, and that cut off to about eight inches; the graft should then be inserted, in the whip or tongue method, just at the crown or union of top and root. The same course may be adopted with seedlings in the ground, with exception of shortening the roots.

Grafting on small pieces of roots, may answer for the growing of some varieties in the nursery; but very few, when removed, are found to have made much but small fibrous roots; and when planted in the orchard, require staking for years, and rarely ever make good trees. The practice has been largely followed, but is now condemned by most nurserymen, and that of grafting only on the whole of a root, as first mentioned, advised. Cleft grafting is generally pursued on trees of large size in the orchard, and may be done in October or November often with as good success as in spring.

Nurserymen generally practise taking up the seedling trees late in autumn, and heeling them in, as it is termed, viz., covering them, when laid down at an angle of 45°, with earth. This is done in the cellar or root house, from whence they are taken and grafted in February and March, and repacked in boxes just deep enough to allow one inch of sand on the bottom; and the stock grafted just coming level with the tops, sand is mixed intimately among them, covering all of root and union of graft. They are then set away in a cool place, but free from frost, until the day of planting.

By Budding. This course, from the immense demand for trees and the more ready and extended propagation by means of roots, has almost been discarded during the past six or eight years. Budding is now again, however, coming into favor. Stocks for budding should be thrifty, of about half inch diameter, and the bud, inserted about four to six inches above the ground, and as much on the north side of the stock as possible. The time when, is usually

the month of August, varying from early to late in month, as the location is South or North, and the season early or late.

By layers and cuttings. This course is only pursued to increase the quantity of stocks of the Paradise apple on which to dwarf varieties. Some growers, however, west, have reputation for increasing largely, and making fine saleable trees more rapidly by means of layers, than otherwise: we have never seen them.

Cutting of Scions. These may be cut at any time from the fall of the leaf in October, to the swelling of the bud in spring—always, however, taking care that there is no frost in the wood at the time of cutting. We consider the best time late in the fall, when they may be packed in moss, damped, and wrapped in oil silk, laid in a cool cellar, where they will usually keep well until spring. The wood of the past season's growth is that required, and best to cut, if possible, from bearing trees. When the cuttings are not made until toward spring, a black and diseased appearance at the pith will oft be seen in those of vigorous growth. This, while it would, perhaps, be of no moment on the original tree, sometimes is thought to lessen the vitality and success of the scion.

Selection of Trees from a Nursery. Trees of thrifty, not over luxuriant habit, five to seven feet high, three years from bud or graft, with branches from three feet up, well formed into rounded heads, are worth double the price of trees six years old, ten and twelve feet high, without a branch within eight feet of the ground. It should, however, always be recollected by the purchaser, that all varieties have not the same habit and regular form of growth; that while a nursery-man can supply a tree of the Baldwin, straight, and just to the fancy, he may often find it difficult, nay, impossible, to do so with the Fall Wine, American Pearmain, and many other varieties at the same age. All this should be remembered by the purchaser, and in his selection be guided more by the stocky pyramidal form of the stem, and the position of branches, rather than height of tree.

Influence of Climate and location. Climate, as we have said on a previous page, has no farther influence than to enhance maturity and vigor as we go South; but location, in its preventing of injury from frosts or severe cold, is quite another thing, and deserving the attention of every planter. Too often do we see orchards planted out in the rich level valley of a farm, when the hills around are neglected. Too often on small farms is this done also, to the loss comparatively of the best piece of plow land, when, had the planter known that trees planted on his hills would have been more hardy, and have produced fruit five years to every three when grown in the

valley, he would have, without doubt, made his orchard on his hills. There are some parts of the West, and very much at the East, where the hills are entirely unsuited to the plow; yet by planting with trees, and digging around until of twelve or more years old. they will make the most profitable of orchards.

On the prairies, a belt of trees around the orchard is considered of great benefit in protecting from the sweeping winds, sometimes destructive to fruit and trees. Here also the selection of the highest knolls and oak groves is found best for success in fruit growing.

Influence of Stock and hardihood. Recently there has been much speculation respecting the hardihood as well as bearing of budded or grafted trees, all of which has doubtless arisen from the indiscriminate use of small pieces of roots. That budding will be found in the main any better than the grafting process, when performed, as advised, at the crown, and on the whole of a seedling root, we are disposed to doubt, although many good orchardists now favor it. The only point we can see in its favor is the comparative hardihood of the stock as compared with that of the variety intended to be grown: this will in some varieties make budding the preferable mode, as it is now well known that some, indeed most, of the strong rapid-growing sorts, of northern or eastern origin, are somewhat disposed to "bark burst" near the ground, and to remedy this, budding will be adopted. But again, all seedlings are not alike hardy—although as a whole, more so than worked varieties; and undoubtedly cultivated sorts may be found, which, if worked as grafts on whole roots, and again re-worked at three feet from the ground, would ensure as much hardihood as is in the nature of trees; yet this will never be practised to any considerable extent, on account of its expense in the growing a tree. That the habit of bearing will be increased or lessened by budding or grafting, as we advise, is also another feature at this time in dispute, but we can see nothing to favor it, except the fact that trees budded do produce better than roots grafted on the old common indiscriminate practice of using anything in shape of a piece of root, depending on the richness of soil to create from it a tree for sale. For other remarks on influence of stock, see previous pages.

Transplanting and distances. Trees when taken from the nursery should have their roots immediately covered in the ground, on arriving at their destination. Often trees are left out over night on wagons, subject to severe cold and frost, by which they are not always ruined, but frequently so far injured as to check their entire growth one season. We do not like the practice of shortening back the tops of apple trees where they have been taken up with care; but as usually dug it is requisite to success that the top be shortened

back to correspond with the diminished root. One reason for objecting to the shortening in, is, that it has a tendency to start the top of the tree too thick, and we prefer with the apple to thin out, rather than increase the number of branches.

The mode of how to plant has been written on a previous page.

The distance apart, for an apple orchard, depends very much on the soil and the variety—rich deep soils requiring a greater distance than those of shallow depth, and inferior quality. And of varieties, such as the Harvest, American Pearmain, Lady Apple and other stocky or upright growing sorts, twenty-five feet apart would be sufficient; while the Baldwin, Gravenstein, Sweet Bough, &c., or those of rapid broad growth, would need, on rich soil, forty feet.

Soil and Manures. Of the soil, it is impossible to designate any one that will suit all varieties; we therefore, in our text descriptive designate the principal character of the soil suited to each. "All deciduous trees require a considerable proportion of potash for the elaboration of their juices in the leaves, and are prosperous, or otherwise, in proportion to plentiful or scanty supply of that substance in the soil. Liebig has shown that the acids generated in plants are always in union with alkaline or earthy bases, and cannot be produced without their presence. * * * Now, the apple tree during its development, produces a great quantity of acid; and therefore in a corresponding degree, requires alkaline, and probably, earthy bases alone, as an indispensable condition to the existence of fruit."

"It cannot be denied that ammonia, and also the humus of decaying dung, must have some influence on the growth of the tree in such soils, and also in the development of the fruit; but it is most certain, at the same time, that these alone would be perfectly inefficient for the production of the fruit without the co-operation of the alkaline bases. The size, and perhaps the flavor of the fruit may be somewhat affected by the organic part of the manure, but its very existence depends upon the presence in the soil of a sufficient quantity of those inorganic or mineral substances which are indispensable to the formation of acids."

"The analysis of the apple (fruit) shows in 100 lbs. of ashes, deprived of carbonic acid, about 13 lbs. of phosphoric acid, 7 lbs. of sulphuric acid, 38 lbs. of potash, and 25 lbs. of soda; these four bodies forming about 83 per cent. of the whole ash:" while analysis of the ash of the wood exhibits about 16 per cent. of potash, 19 of lime, and 17 of phosphate of lime; and in the ash of the bark, about 5 per cent. of potash, 50 per cent of lime, and 3 of phosphate of lime. Another analysis gives 45 per cent. of lime in the ash of

the wood. From these it is apparent that on most of our western soils, application of lime and potash will be found requisite to the production of healthy wood and fruit. Upon much of the heavily timbered lands of the west, which have been cut and burned, the ashes from the burned wood has furnished all the lime and potash requisite to success for a certain length of time; but, already, there are orchards in Ohio, where application of lime and potash in the form of wood ashes or otherwise, is required in order to retain health of trees, and perfection in fruit. The western prairie soils require these only; of all other ingredients they are naturally abundantly supplied, and application of animal manure is not needed.

Cultivation. Cultivation of the soil of a young orchard is as requisite to success as cultivation of a crop of corn; but while the trees should be kept free from weeds, suckers, insects, and the like, they should not be so stimulated by application of animal or liquid manures as to induce rank growth. All such over-supply of stimulus induces a degree of tenderness in the constitution, early fruitfulness and consequent early decay. We recall to mind as we write, two orchards planted about thirty-five years since, one of which has always been highly, even excitingly, cultivated, and is now decaying; while the other has been more regularly and moderately grown, and is now in a healthy fruiting state. All crops besides wheat, rye, oats, and clover, may oe grown in an orchard. Potatoes, peas, and corn are most advisable.

Pruning. The pruning of the apple, as an orchard tree, if annually attended, is but a light task; it should consist mainly of cutting away all branches that have a tendency to cross or overlap one another—to stop back side limbs that are apparently drawing too rapidly and creating irregular form, and to cut out rank shoots. This is the main of orchard pruning, after the heads are once formed, as they should be at planting, or the first year thereafter, by cutting to a regular rounded form. Some varieties produce their fruit upon short spurs on the limbs; others on the extreme ends of slender shoots of previous year's growth, and must be pruned with reference thereto; others, again, naturally grow upright and thick, these require thinning out; while others, are of straggling rampant habit, requiring only the checking of branches at ends to maintain an evenly balanced tree; these qualities will be found partially noted in our descriptions of varieties. For the art of pruning, to create particular forms for the garden, and of dwarf trees, we refer our readers to a previous chapter

Insects and diseases. Of insects injurious to fruit trees, western cultivators have, until within a few years, been comparatively ex

empt; they are now, however, through the great amount of importations of trees from the Eastern States, becoming numerous and troublesome.

The Borer, (*Saperda bivittata*), is yet little known; a few instances only of its appearance West have been noticed. It is an insect that should be watched and checked on its first appearance. It is destructive, not only to the apple, but the quince, thorn, mountain ash, suffer equally. The perfect insect is a brown and white striped beetle, about half an inch long, which, flying at night, may be destroyed in the month of June by building bonfires in the orchard. In its larvæ state, in which it does its work of destruction, it is a fleshy white grub, which enters the tree at the collar, just at the surface of the ground, girdling or perforating the wood to such an extent as often to cause death before its attack is noticed, except by the careful observing orchardist; the small round holes from which dust is ejected indicate its presence. Some out out the worm with a knife, others use a barbed wire, which is either thrust into the hole and destroys the worm, or on withdrawing brings it out. Downing advises as a preventive, washing the bodies of trees with the following mixture: "one pint of sulphur, one gallon soft soap, and sufficient tobacco water to reduce to the consistence of paint."

The Caterpillar, (*Clisiocampa Americana*,) or common orchard Caterpillar, has been long known as destructive of the foliage of orchards. This, says Thomas, is hatched in spring as soon as the leaf buds begin to open. At this time, it is not the tenth of an inch, long, nor so large as a cambric needle, but it continues to increase constantly in size for several weeks, until two inches long, and a quarter of an inch in diameter. It then spins a cocoon, and passes to the pupa state. In the latter part of summer, it comes out a yellowish brown miller, lays its eggs, and dies. The eggs are deposited in cylinders or rings, containing three to five hundred each, encircling the smaller branches, and usually within a few inches of the extremity. They remain through winter, protected from the weather by a vesicular water-proof varnish, and hatch in spring, as just stated. Each collection of eggs makes a nest of caterpillars."

A mode for their destruction, is to cut off the small branches which hold the eggs, during autumn or winter, and burn them. Those that escape this mode, may be destroyed in May and June by attaching a sponge or round brush to a pole, and saturating the first with spirits of ammonia, turn it around among their nests. For this work, one hour in the morning early, is worth four at any other time in the day.

The Canker Worm. (*Anisopteryx pometaria.*) This insect we

have never seen West until the present season. It is not confined to the apple, but, if anything, it prefers the elm to all others.

"The male is a moth, with pale, ash-colored wings, with a black dot, a little more than an inch across. The female is wingless, oval, dark ash-colored above, and gray beneath.

The worm usually rises out of the ground very early in the spring, as soon as the ground is free from frost, though a few find their way up in the autumn. The females having no wings, climb slowly up the trunks of the trees, while the winged males hover about to pair with them. Very soon after this, if we examine the trees, we shall see the eggs, of which every female lays some sixty or a hundred, glued over, closely arranged in rows, and placed in the forks of branches, and among the young twigs. About the twentieth of May, these eggs are hatched, and the canker worms, dusky-brown, or ash-colored, with a yellow stripe, make their appearance, and commence preying upon the foliage."

The remedies preventive of their injuries, are, a belt of canvass saturated, with tar and train oil, and encircling the body of the tree. Another is a leaden trough, encircling the body, secured by wooden wedges between it and tree, and filled with oil. Another, is spading up the ground underneath all trees on which they appear, in the fall, and dressing liberally with lime. Another, is bands of straw and cotton batting tied around the tree, and examined daily to kill all that have become entangled therein.

The Apple Moth, (*Carpocapsa pomonana*,) is the insect which disfigures so many of our apples and pears, causing them to fall prematurely from the tree. The moth has a head and thorax of brown mingled with grey, fore wings light grey and brown, and a dark brown oval spot on the hinder margin. In the months of June and July, they deposit their eggs in the eye or blossom end of the fruit; these hatch in a few days, and the worm, a reddish white grub, eats its way to the core, soon after which the apple falls to the ground, when the worm leaves and seeks shelter and protection in the crevices and underneath the rough bark of the tree, where it spins a white web-like cocoon, and remains until the next season.

Remedies. Keeping the bodies well scraped, and annually washed with lye-water early in spring, picking up all the fruit as fast as it falls, or letting swine run in the orchard to eat it. Old cloths or tufts of grass, laid in the branches of the trees, attract them, from whence the cocoons may easily be destroyed.

The Bark Louse, a species of *coccus* or scale insect, is of a brown color, about one tenth of an inch in length, of oblong oval form, attaching itself to the branches, and injuring the tree by sucking the

sap. It is destroyed by strong lye-water, by whale oil soap, or a mixture of lime soft soap and water, of the consistence of common whitewash, and applied to the bark with a hard brush, in winter or early spring.

The Wooly Aphis (*Aphis lanigera*) makes its appearance in the form of minute white down, in the crotches and crevices of branches. It is easily destroyed by washing the tree with ley-water, lime wash, or whale oil soap. A good wash for all insects is made of, say five gallons of weak ley, one pound powdered sulphur, and four ounces soot, or "lamp black," thoroughly mixed.

The blight or blackening and decay of terminal shoots we have elsewhere written on, and refer thereto. Boring holes in the trees, and plugging them with sulphur, are about as remedial as whistling to the moon.

Rust on the surface of the leaf is a disease said to affect some of the older plantations in Southern Ohio. We have never seen it, but suspect from accounts, that it is caused from an unhealthy state of the tree in exhaustion of elements in the soil, and therefore a result not a cause of disease.

Of terms used in description of varieties.—Thomas, in his "Fruit Culturist," has the most perfect explanation of terms in general use in the description of fruits, form of trees, etc., as yet published. We therefore adopt most of them, in order to continue uniformity. These terms, as applied to the growth of tree, in its shoots, has reference mainly to young trees, and comparatively, as follows: *Erect*, as in the Early Strawberry. *Diverging*, as in the Domine, or Ribston Pippin. *Spreading*, as in Rhode Island Greening. *Drooping*, when they fall below the horizontal, which many spreading trees assume, as they grow into the larger branches of older trees. *Ascending*, when they curve upwards, as in Gravenstein. *Irregular*, as in black Gilliflower. *Straggling*, similar to preceding, but more slender and curved, as in Jonathan. *Straight*, as in Northern Spy. *Stout*, as in Red Astrachan.

"The color of the shoots varies greatly in the same variety at different periods of the year, as well as with different degrees of exposure to the sun, and with a change of soil, climate, and season. When fresh, or very young, all have a greenish color, but gradually assume various shades of yellow, olive, brown, red, purple, and nearly black, as the season advances, and as they become bare, and are exposed to the sun and weather. For this reason, in describing the color, the terms must be relative, and can only be correctly applied by a comparison at the time with the color of other sorts.

During winter, and early in the spring, the shoots of most trees become so much darker than at other times, that it is only practice and by placing the different sorts side by side, that accuracy may be obtained. Skilful culturists will readily distinguish, by a glance at the color of shoots, many of the kinds they cultivate; but the peculiar cast is hard to describe in words, in the same way that it is impossible to describe the hand-writing of an individual, so as to be known from fifty others, although many can, at a glance, know the penmanship of hundreds of different persons. A few of the most strongly marked cases, however, present peculiarities of color which form useful points of distinction. No one for instance, could easily mistake the yellow shoots of the Bartlett and Dix pears, for the dark brown or purple of the Tyson and Forelle; or the light greenish cast of the Bough and Sine Qua Non apples, for the dark color of the Northern Spy, or dark brown of the Baldwin; nor the downy or greyish appearance of the Ladies Sweeting and Esopus Spitzenburg, for the clear shining brown of the Gravenstein and Red Astrachan."

The *color* of the leaves may sometimes assist in description, as *light green* in the Yellow Bell-flower and Rambo; *deep green*, as in the Rhode Island Greening; *bluish green*, as in Peck's Pleasant.

Forms of the Apple.—In these we follow the general impression understood of terms by most horticulturists, and represented by Barry, from whom we extract:

Round or Roundish (fig. 29,) when the outline is round, or nearly so, the length being about equal to the breadth.

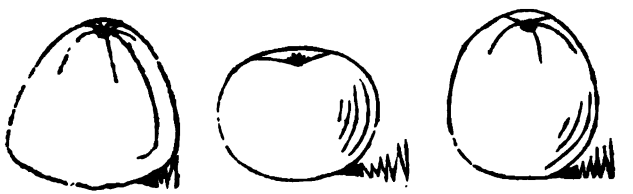
Flat (fig. 30,) when the ends are compressed, and the width considerably greater than the length.

Conical (fig 31,) in the form of a cone, tapering from the base to the eye.

Ovate or Egg-shaped (fig. 32.)

Oblong (fig. 33,) when the length is considerably greater than the width, and the width about equal at both ends, not tapering, as in the conical.

In addition to these forms and their various modifications, some varieties are—



31 29 33

30 33 34

Angular, having projecting angles on the sides.

One-sided, having one side larger than the other.

Ribbed (34,) when the surface presents a series of ridges and furrows running from eye to stem.

Of size—Small as in Gilpin, medium as in Fameuse, and large as in Rhode Island Greening.

Of the meaning of many terms, as Calville, Pippin, Greening, &c., there seems to be no certain definition beyond that of accepted usage. Calville, generally intended to convey the idea of a fruit of light specific weight, and somewhat ribbed or furrowed, especially about the calyx. Pippin generally conveys the idea of a firm brittle texture of flesh, in the apple; while Greening is understood to imply a breaking, tender character. Pearmain, to indicate a particular, roundish, conical form, with an aromatic perfume in the flesh.

Uses.—The uses of the apple are so generally known, that it seems superfluous here to mention aught of them. Aside from table use, raw and cooked, making of cider, drying, &c., &c., the apple deserves more attention as food for animals; analysis having shown that it is about equal to the potato in fattening properties.

VARIETIES.

CLASS I. *Worthy General Cultivation.*

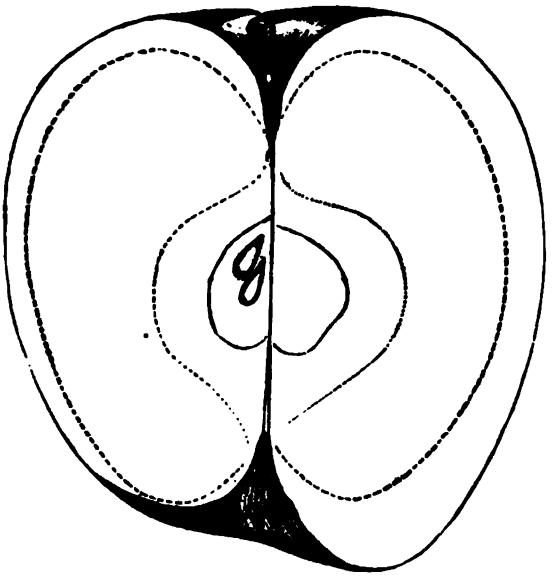
AMERICAN PEARMAIN.

American Summer Pearmain. | Watkis's Early.
Early Summer Pearmain.

This variety rarely ripens earlier than September, and we therefore discard the word "summer."

In the nursery, the growth of the tree is slow, and, as an orchard fruit, it will not "pay." It cannot, however, be dispensed with for supplying home wants, ripening gradually, as it does, during the whole of September. The trees require thinning out of small branches; but, as it fruits mostly on the ends of branches, should never be

shortened back. It requires a deep, warm soil, well supplied with lime and potash, when it succeeds admirably in all sections.

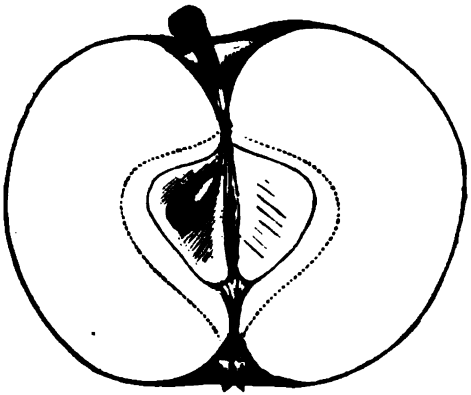


Size, medium; *form*, roundish oblong, sometimes angular; the form varies, and also size, as grown on top or bottom limbs, and in good or poor soil; *color*, red, streaked and dotted with grayish yellow; *stem*, medium, projecting about even with the surface; *cavity*, narrow; *calyx*, open, erect, slightly recurved; *basin*, deep, round, smooth; *flesh*, tender, subacid,—best; *core*, small; *seeds*, ovate pyriform.

Autumn Strawberry.

Late Strawberry. | Strawberry.

American: originated, Western New York. *Size*, medium, or rather below; *form*, roundish; *color*, light and dark red, streaked, and, in the sun, the dark red prevailing, and with a bloom like a plum; *stem*, slender, medium length; *cavity*, open, regular; *calyx* small, nearly closed; *basin*, shallow, slightly ribbed; *flesh*,



AUTUMN BOUGH.

yellowish white, tender, juicy, sub-acid; *core*, medium; *seeds*, large, full. *Season*, October.

Autumn Sweet Bough.

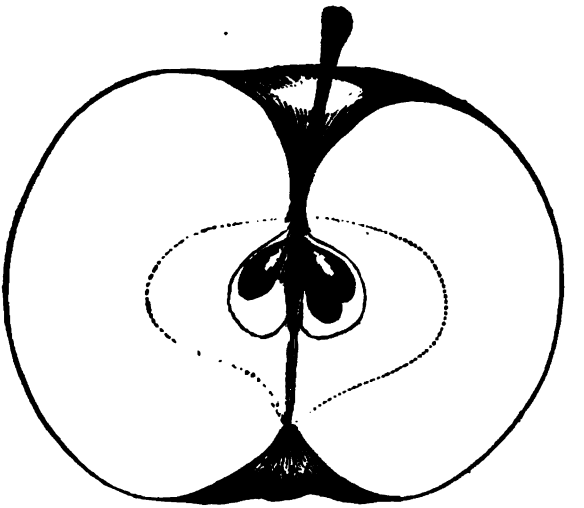
American: tree, vigorous, productive; *size*, medium or above; *form*, obtuse conical; *color*, clear light yellow, with occasionally a russet blotch, and a few small russet dots; *stem*, slender, curved to one side; *cavity*, deep, regular; *calyx*, closed with long segments; *basin*, ribbed or furrowed; *flesh*, white, crisp, tender, deliciously sweet; *core*, small; *seed cavity*, hollow; *seed*, plump, full. *Season*, September.

BALDWIN.

Late Baldwin, Pecker, | Woodpecker, Steeles Red Winter.

American: originated in Massachusetts. This variety inclines to bitter or dry rot on soils deficient in lime and potash; and for the western soils should be worked where intended to have the head commence. Tree, vigorous, upright, dark brown shoots, very productive. Our drawing was taken from an Eastern grown specimen, and is not more than one-half the size of this variety when grown in Illinois.

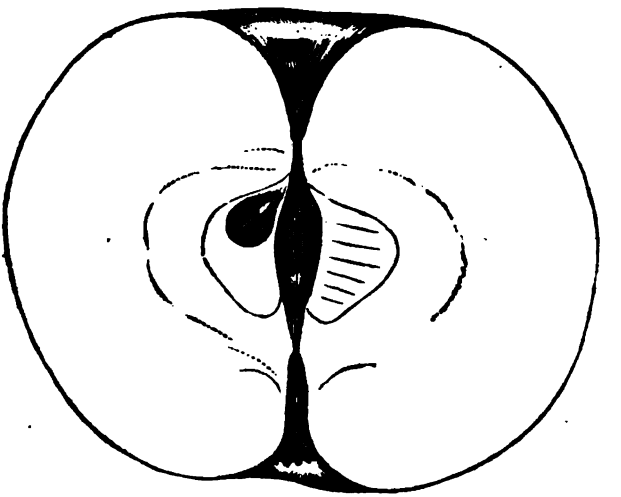
Size, large; *form*, roundish, narrowing a little to the calyx; *color*, yellowish, nearly covered and striped with red, dotted with a few russet spots, and with radiating streaks of russet about the stem; *stem*, three-fourths inch long, slender; *cavity*, deep; *calyx*, closed;



basin, rather narrow, plaited; *flesh*, yellowish white, crisp tender, sub-acid; *core*, small, compact; *capsules*, ovate hollow; *seeds*, long ovate, pyriform. *Season*, December to March.

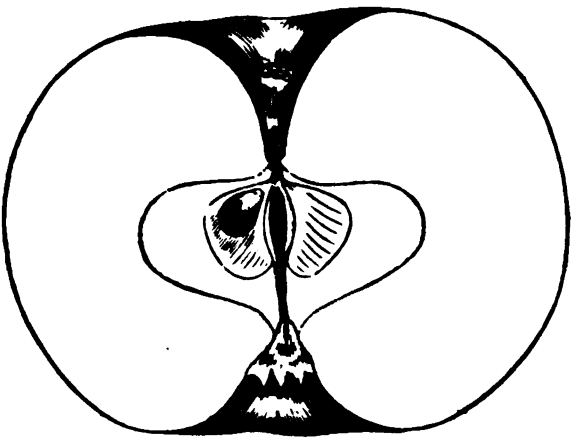
BALTIMORE.

Baltimore Pippin, | Cables Gilliflower.



Origin unknown. Tree, thrifty, slender, very productive, on warm rich soils. *Size*, medium to large; *form*, round; *color*, light yellow, striped, and splashed with red, a little bronzed russet about the stem, and often a blue tinge marbled toward the stem resembling a bloom; *stem*, short; *cavity*, open, deep, regular; *calyx*, small, half open; *basin*, shallow, regular; *flesh*, white, with a slight tinge of yellow, tender, crisp, juicy, sub-acid, sprightly; *core*, medium or small; *seeds*, obovate pyriform. *Season*, December to March. This is distinct from the Baltimore, of Lindley, which is of pale lemon color, tinged with red, and with large open calyx.

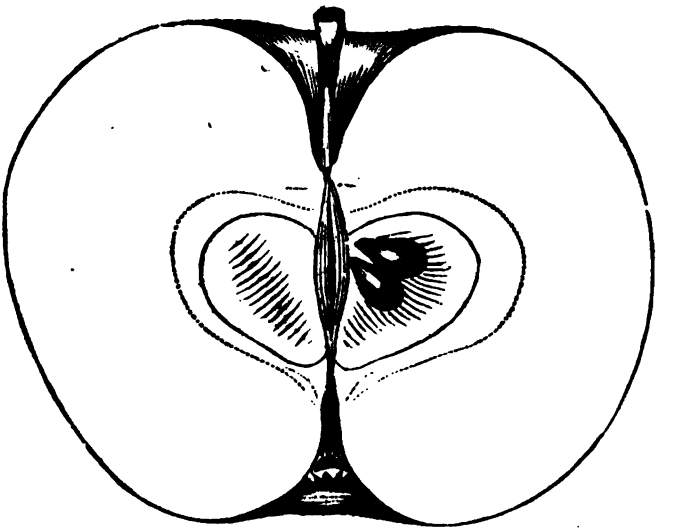
BETHLEHEMITE.



"This is a variety somewhat resembling the Newton Spitzenberg, and we have testimony of one or two who say they know it under that name. We are not, however, satisfied of their identity, and as the really good qualities of this fruit are such as to make it desirable in all collections, we have no hesitation in recommending it. Thus far all specimens we have seen were from trees grown in rich, loamy soils, and all we can learn of its history is that it came from Bethlehem, in Ohio. *Size*, medium; *form*, roundish, flattened, tapering slightly to the apex; *color*, pale yellow ground, striped and stained with two shades of bright red, dotted with irregular shaped brown dots, some russet about the stem: *calyx*, medium, sometimes large; *basin*, deep, broad, irregular, somewhat furrowed; *stem*, short; *cavity*, narrow, irregular; *flesh*, yellowish white, tender, with a mild sub-acid juice, and exceedingly pleasant flavor; *core*, small, compact; *seeds*, obovate, obtuse pyriform. *Season*, November to January, but keeps until April. Trees, upright, strong growers.

Belmont.

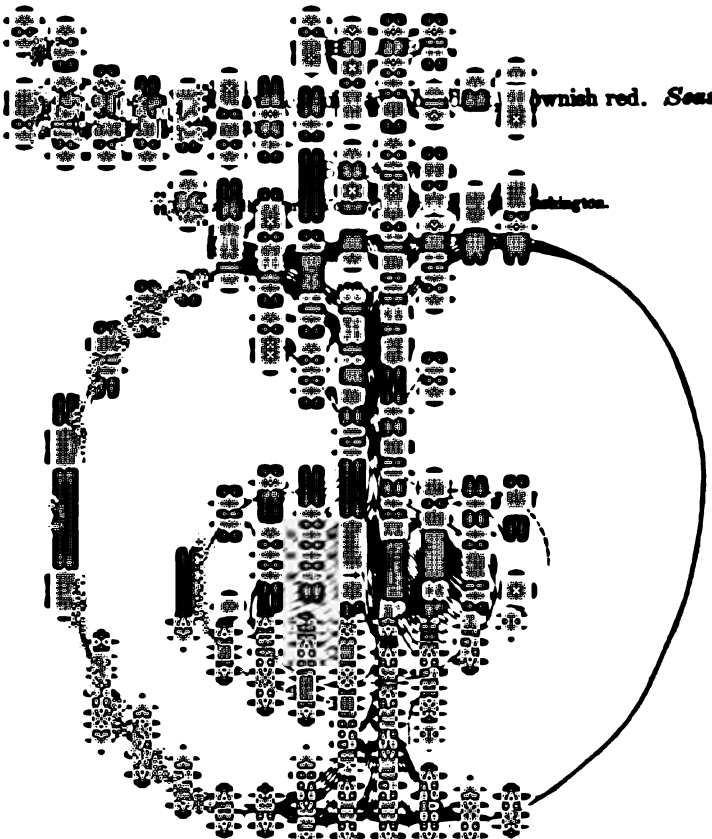
Gate, Mamma Beam, Golden Pippin *of some*, | White Apple, Kelley White, Waxen *of some*.



American. By some stated to have originated in Virginia, by others in Pennsylvania, and, on the authority of Prof. Kirtland, Mr. Downing in his first edition of "Fruits and Fruit Trees," made it synonymous with the "Waxen" of Coxe. As this is yet uncertain, we adopt the name by which the fruit is most largely known.

Tree, healthy, vigorous, spreading, wood yellowish, good bearer, does not succeed on the alluvial soils of the West, but on all high, warm, or limestone soils does finely, and makes a large tree.

Size, medium to large; *form,* irregular, usually roundish, sometimes oblong rounded. South it grows very large, and also West, on new rich soils in Wisconsin; but grown South its delicacy, fine grain and flavor are lost. *Skin,* thin, smooth, glossy, or oily; *color,* rich clear light yellow; at South with a few dark brown specks, and North with a clear vermillion red cheek, with carmine spots; South slight russet marblings, and much of mould or fungus; *stem,* medium length, projecting slightly beyond the surface, always slender; *calyx,* varying from small and close to open and reflexed; *basin,* from shallow to rather deep, always furrowed; *flesh,* yellowish white, fine grained, very tender, juicy, sprightly, sub-acid; *core,*

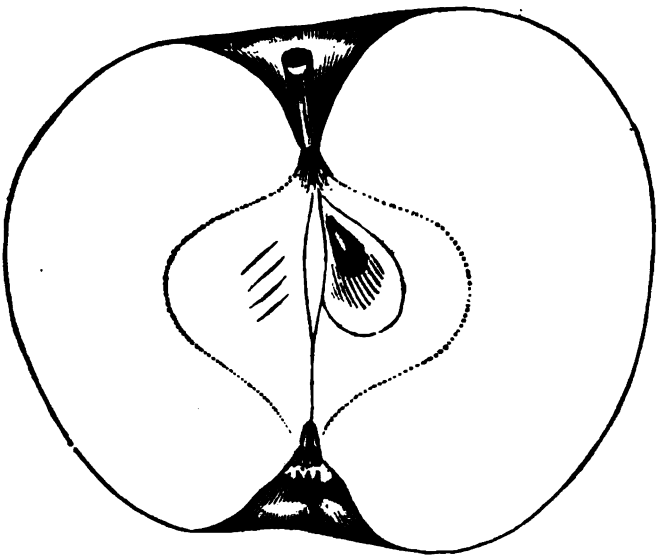


…ownish red. *Season*,

…ington.

…owth, with yellowish,
…bs, very hardy, but
… otherwise, very pro-
…gular, tapering to the
…sun; *stem*, long, slen-
…, plaited, deep; *flesh*,
…large; *capsules*, long,
broad end. *Season*,

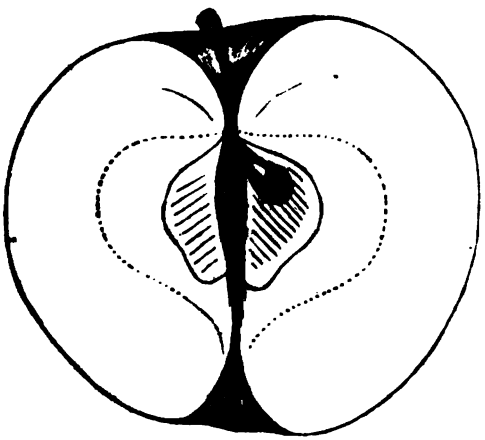
…vigorous, spreading,
…edium to large; *form*,
…ng slightly toward the
…; cloudy flakes, sunny
…panded; *calyx*, open;



segments, short; *basin*, narrow; *flesh*, white, fine-grained, sweet, juicy; *core*, close, compact; *seeds*, small, plump, light-brown. *Season*, November to March.

Bullock's Pippin.

American Golden Russet, Sheepnose, | Golden Russet, Little Pearmain, Fall Wineap, *erroneously.*

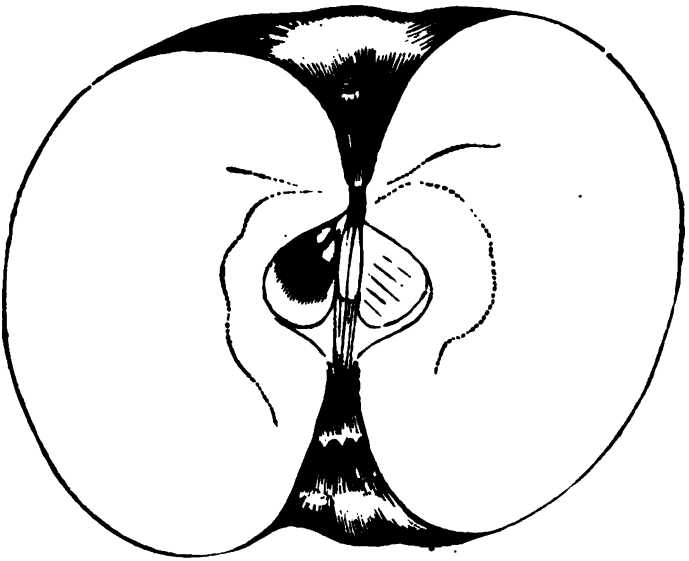


American. Tree, ultimately of only medium size, with a round regular head, shoots erect, rather slender, admirably suited to rich soils of Southern Ohio, Indiana, etc., etc. Grown south, the fruit is almost entirely covered with russet; north, and on sandy soils, it is a warm, rich yellow, with only marblings of russet.

Size, small to medium; *form*, roundish, ovate, tapering much toward the eye; *color*, generally rich golden yellow, overspread with soft russet, and in sun, a marbling of red; *stem*, slender; *cavity*, narrow, regular; *calyx*, small, closed; *basin*, shallow, sometimes furrowed; *flesh*, yellowish, tender, juicy, almost buttery, delicate, sprightly; *core*, large for size of fruit; *seeds*, full, ovate, pyramidal. *Season*, December to March.

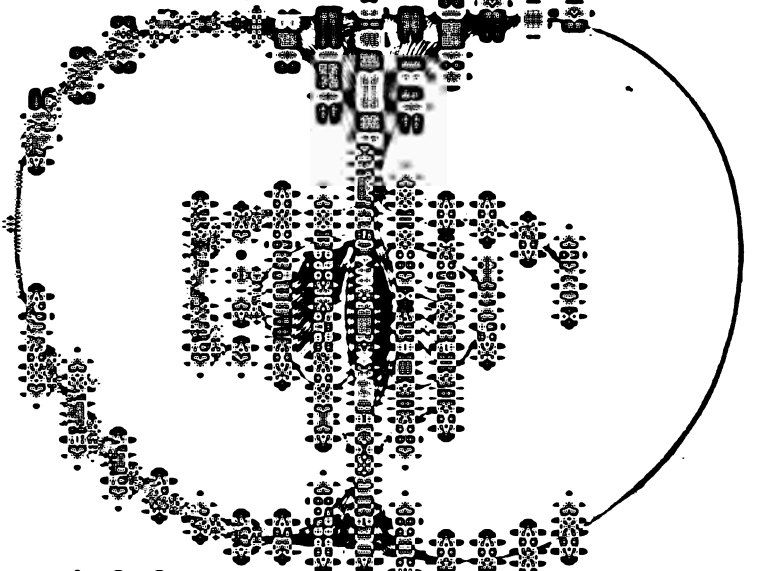
Canada Pippin.

Canada Reinette,
Canadian Reinette,
Pomme de Caen,
Reinette Grosse du Canada,
De Bretagne,
Jamaree,
German Green,
Reinette du Canada,
Grosse Reinette d'Angleterre,
Reinette du Canada Blanche,
Reinette du Canada a'Cories,
Portugal,
Wahr Reinette,
White Pippin,
Yellow Newtown Pippin, *erroneously.*



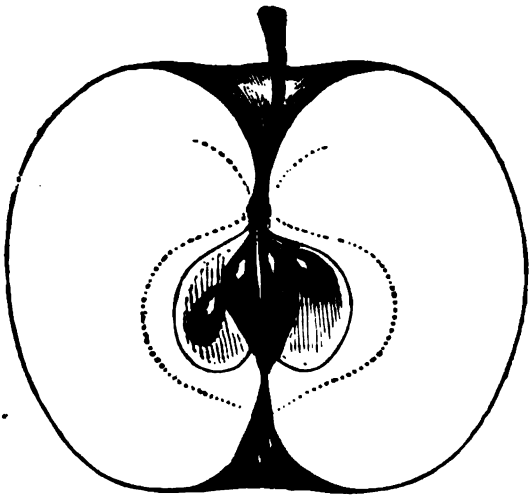
Foreign. Tree, strong, vigorous, upright, spreading, productive, very hardy. *Size*, large; *form*, roundish, flattened, irregularly angular, much ribbed, sometimes almost oblong and smooth; *color*, light greenish-yellow, a blush in sun, and small dark green specks, surrounded with light green suffused beneath the skin; *stem*, short; *cavity*, narrow, slightly russeted; *calyx*, large; *basin*, deep, angular, with prominent ribs; *flesh*, yellowish white, crisp, tender, juicy, sub-acid, sprightly; *core*, small, compact; *seeds*, dark, almost black. *Season*, January to May.

oductive, har-
yellow, with-
hen fully ex-
d; *stem*, pro-
gular; *calyx*,
edium depth,
weet, tender;
d November.



er." We do
broad foliage,
ed; *color*, dull
specks; *stem*,
asin, shallow,
grained, ten-
apsules; *seeds*,
October.

Cornish Aromatic.



Foreign. Requires rich, warm, sandy soil. *Size*, medium; *form*, roundish, regular, sometimes a little conical; *color*, yellow ground, mostly overspread with rich red, dotted with yellow russet spots; *stem*, long, slender; *cavity*, regular, open, rather deep; *calyx*, small; *basin*, abrupt, furrowed; *flesh*, yellow, crisp, juicy, sub-acid, of flavor closely allied to Esopus Spitzenburg; *core*, open, hollow, regular form; *seeds*, large. *Season*, November to February.

Danvers Winter Sweet.

Epse's Sweet.

American. Tree, vigorous, spreading, shoots yellowish, very productive; valuable winter fruit for baking or stock.

Size, medium; *form*, roundish, oblong; *color*, dull yellow, with orange blush, and small russet specks; *stem*, slender, inclining to one side; *calyx*, small, woolly; *basin*, shallow, rather narrow; *flesh*, yellow, firm, sweet; *core*, large, open; *seeds*, ovate, pointed, dark rich brown. *Season*, December to April.

Dutch Mignonne.

The Dutch *Mignonne—Darling*, or *Favorite*, is from Holland, and a fruit which has proved valuable wherever grown. Tree, with

strong upright shoots, and producing abundantly; very fine in South Ohio. *Size*, large; *form*, roundish, regular; *color*, dull orange, mostly covered with rich dull red, dotted and mottled with large yellow russet specks, and a dash of russet about the cavity of stem; *stem*, long, slender, curved; *cavity*, narrow, deep; *calyx*, open; *basin*, deep, round, regular; *flesh*, whitish, firm at first, becoming tender when well matured, sub-acid aromatic flavor; *core*, small, compact; *seeds*, few, defective. *Season*, November to January.

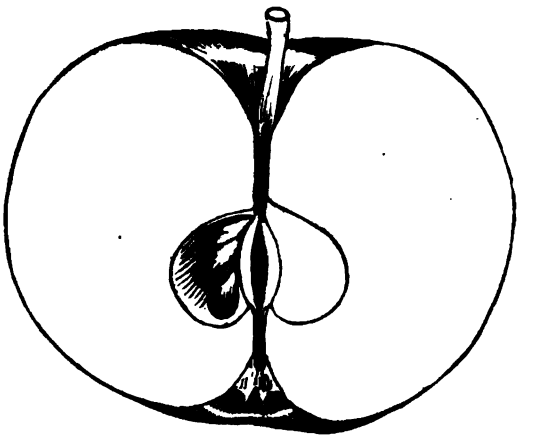
Dyer.

Pomme Royal,	Pomme Water,
Golden Spice,	Bullripe,
Tompkins,	Mygatt's Bergamot,
Beard Burden,	Bird Apple,

White Spice.

American. Tree, a fair grower, not strong, shoots spreading irregular, moderately productive. *Size*, medium; *form*, round, or roundish flattened; *color*, clear yellow, with russet marbled more or less over the surface; *stem*, long, slender; *cavity*, deep, slightly furrowed; *calyx*, with long recurved segments; *basin*, medium; *flesh*, yellowish white, spicy, sprightly, tender, sub-acid; *core*, medium; *seeds*, small. *Season*, October and November.

Early Joe.



American: origin, claimed Ontario Co., N. Y. It is somewhat questionable, if it is not an old Connecticut variety. This apple

has the most of delicate pear flavor of any variety; and while it is all unsuited to orcharding, one tree should always be planted. While young it is of slow growth, but, as trees get older, it improves, and makes a tree of round irregular spreading form of medium size. It is very hardy, but should have rich strong soil; shoots, dark colored; and so foliage.

Size, medium, or rather below; *form*, roundish, flattened; *stem*, rather slender; *cavity*, open, deep, a little russeted; *color*, pale yellowish green, overspread and striped with deep and pale red; *calyx*, small, nearly closed; *basin*, shallow; *flesh*, yellowish white, tender, very delicate; *core*, medium, centre open; *seeds*, short ovate, pyriform. *Season*, last of August.

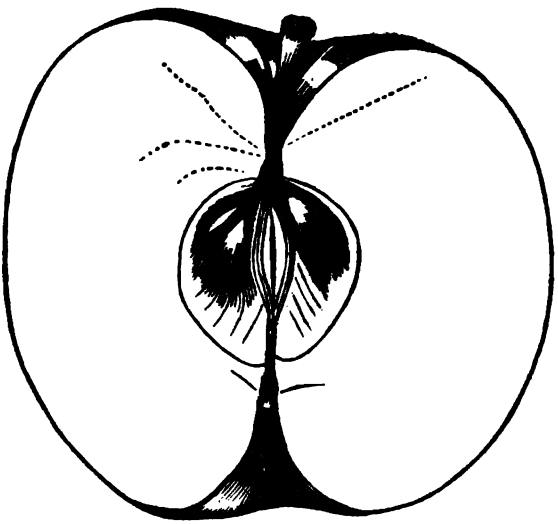
Early Strawberry.

American Red Juneating. | Red Juneating.

American. Tree, very erect in growth, dark wood, numerous leaves erect, with long footstalks; productive, and successful in all localities, and although not best in quality, yet generally esteemed.

Size, small; *form*, roundish, varying to angular and conical; *color*, yellowish white, striped and stained over with bright and dark red; *stem*, varying from long, straight, and slender, to medium, curved; *calyx*, small; *basin*, narrow and shallow; *flesh*, yellowish white, tinged with red, sub-acid, sprightly, tender; *core*, medium; *seeds*, small. *Season*, July.

Esopus Spitzenberg.



American. Origin on the Hudson River. Tree, healthy, slender shoots; when in bearing, drooping and spreading, making an open head; requires age to produce much or good fruit, and much of lime and potash, when it is a good bearer.

Size, above medium, large when carefully grown; *form*, flattened at base, oblong, tapering roundly toward the eye, considerably ribbed and irregular in its surface, and almost always slightly angular; *color*, rich lively red on yellow ground, dotted and marbled with yellow russet; *stem*, varying, sometimes short and stout, at others long and slender; *cavity*, deep, regular, open; *calyx*, small, closed; *basin*, almost abrupt, furrowed; *flesh*, yellow, crisp, a little tough, exceedingly high flavored and delicious; *core*, regular, ovate, rounded in form; *seeds*, large. *Season*, January to March.

Fameuse.

Pomme de Neige, | Sanguineus, Snow.

Foreign, or rather Canadian origin. It is admirably adapted to all northern sections producing yearly, and always fair smooth fruit. Tree, of moderate, rather diverging habit; shoots dark; and as an orchard tree, only of second size. Without being a fruit of high character, it is just so good that, taken with its production of regular handsome fruit, it cannot be dispensed with. Tree, hardy, and rich strong or heavy soils suit it best.

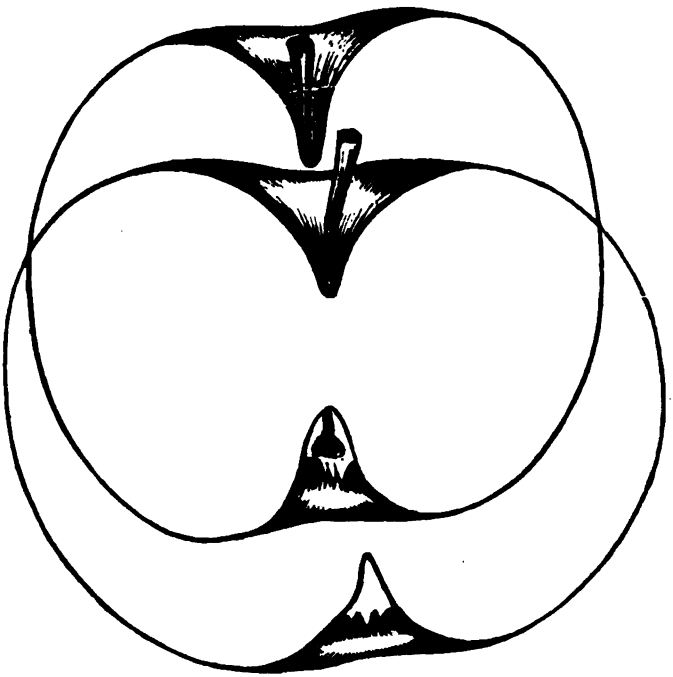
Size, medium; *form*, roundish, somewhat flattened; *color*, greenish yellow, mostly overspread with pale and dark rich red; *stem*, slender; *cavity*, narrow; *calyx*, small; *basin*, shallow, narrow; *flesh*, remarkably white, tender, juicy, with a slight perfume; *core*, close compact; *seeds*, light brown, long pointed. *Season*, October to January.

Fall Wine.

Wine, *of Cole.*

American. Its origin unknown, introduced west from the garden of Judge Buel, Albany, about 1832. Tree, of slender, slow growth; drooping, when in bearing state, very healthy; producing moderately, but annually, large beautiful fruit on the rich Western soils; and fruit of medium size on soils of moderate quality. Our figure exhibits it from the two soils. It is now much grown in Indiana and Illinois as "Wine," from which it is quite distinct.

Size, medium to large; *form*, roundish, flattened; *color*, rich red marbled over clear yellow, and with many spots or specks of brownish—sometimes it is faintly striped; *stem*, slender; *cavity*, deep; *calyx*, half closed; *basin*, open, shallow; *flesh*, yellowish, crisp, tender, juicy, delicious, sub-acid, vinous. *Season*, September to November.



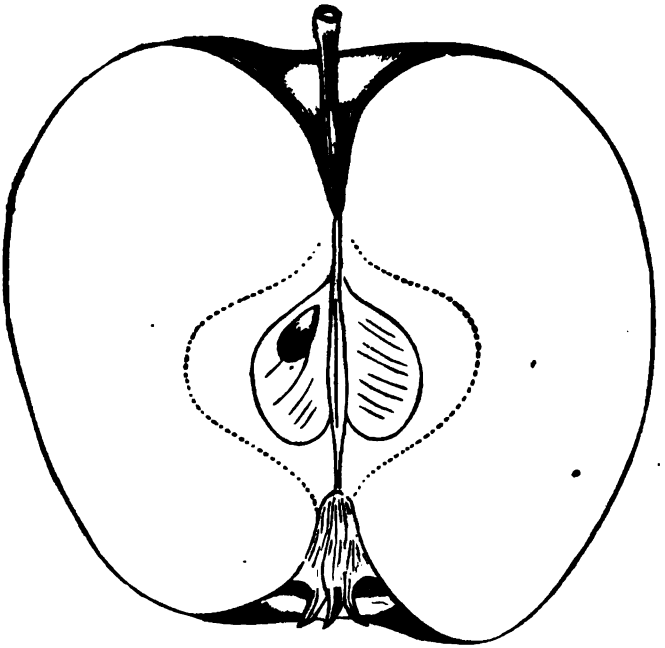
Although evidently an old eastern fruit, it appears now unknown there, if we except the short description made of it by Cole, and his notice of where grown.

Fall Pippin.

Philadelphia Pippin.

This is unquestionably an American seedling, and probably from the "White Spanish Reinette," which it closely resembles in all but its period of ripening. Great confusion exists among growers respecting it, as the Holland Pippin is often grown under this name as well as its parent. It is extensively grown at the West and in the Eastern states, and universally succeeds well; but where the soil is of a clayey nature, on the alluvial bottoms and deep prairies, it does not answer as well. Tree, of growth vigorous, shoots, dark, diverging or spreading, becomes large.

Size, large; *form*, roundish, conical, flattened at ends; *color*, greenish yellow, until fully ripe, then rich yellow with a faint blush, when grown in good soil and exposed to sun; *stem*, long, moder



stely stout; *cavity*, deep, round; *calyx*, above medium, with segments in divisions; *basin*, deep, wide, and open; *flesh*, yellowish white, tender, sub-acid, aromatic; *core*, medium, for size of fruit; *seeds*, ovate. *Season*, October to December.

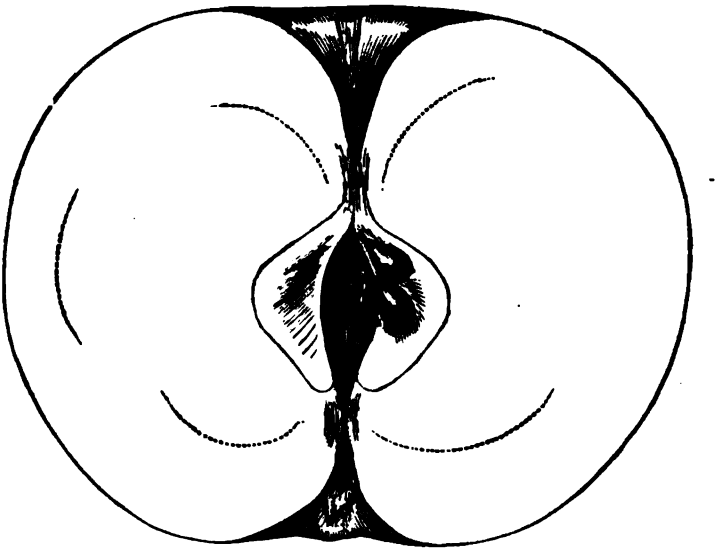
FALLENWALDER.

Fallawater,	Tulpahocken,
Green Mountain Pippin,	Pim's Beauty of the West,
Dutch Codlin, *erroneously*,	Pound, *erroneously*,

Mountain Pippin.

American. Originated in Berks Co., Penn. "It sprung up in the woods, and was left standing after the other trees were cut down; hence the name Fallenwalder, or apple of the cut-down woods." Not worthy a place in small orchards or gardens; but on rich limestone soils, when grown for distant market, it is highly valuable, being of thick skin, fruit always fair and large, and keeping a long time, even in southern latitudes. Tree, strong, vigorous grower; shoots, stout, partially spreading.

Fruit, large; *form*, round, varying to roundish, flattened and roundish ovate; *color*, pale yellowish green, dull red cheek, dotted with a few small irregular-shaped russet dots, suffused or surround-



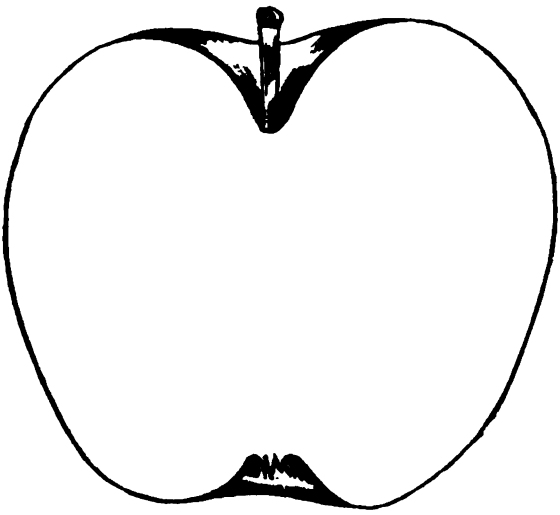
ed with a shade of light green, presenting at first glance, appearance as of white specks; *stem*, short; *cavity*, open, generally regular; *calyx*, small, closed; *basin*, shallow, open, broad, often slightly furrowed; *flesh*, yellowish white, rather coarse texture, tender, juicy, mild, sub-acid; *core*, medium, somewhat open; *seeds*, ovate pointed. *Season*, December to May.

Fort Miami.

Scandiana Mala.

American. Originated near Fort Miami, in Ohio. In April, 1846, we made our outline and description from specimens sent us by A. Spafford, Esq., Perrysburgh, O., since which we have been unable to obtain of the fruit. Trees, thrifty, healthy growth; shoots, dark color, nearly upright, spreading; not an early bearer, but the original tree said to be very productive.

Fruit, medium to large; *form*, roundish oblong, flattened at both ends, widest at base, uneven, somewhat ribbed; *color*, brownish red, more or less russeted; *stem*, medium size, three-fourth inch long; *cavity*, deep, open, uneven; *calyx*, medium size, closed; *basin*, me-



dium depth, furrowed; *flesh*, yellowish white, crisp, breaking, exceedingly high-spicy, sub-acid flavor. *Season*, February to May.

Garden Royal.

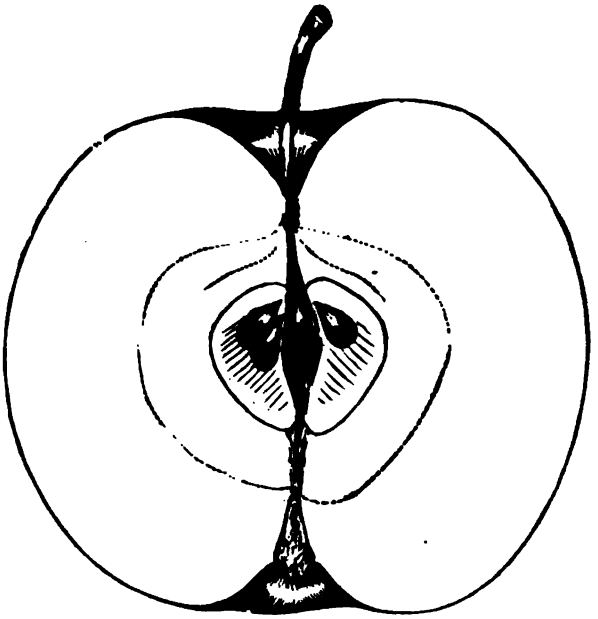
American. Originated in Mass. Tree, slender, slow grower while young, hardy, and makes a tree of medium size, annually productive; suited to small orchards or gardens where a delicious fruit is desired for table use.

Fruit, rather below medium; *form*, roundish, inclining to flat, very regular; *color*, a yellowish ground, with dull red stripes, becoming brighter in sun; *stem*, short, slender; *cavity*, narrow; *calyx*, large, open; *basin*, shallow; *flesh*, yellowish white, fine-grained, tender, mild, sub-acid. *Season*, last of August and September.

Golden Sweet.

Orange Sweet, | Trenton Early.

American. Originated in Connecticut. Tree, free grower while young, making, however, an orchard tree of only medium size, spreading irregular branches; succeeds well in all soils; productive annually of large crops of fair fruit. This variety was shown two years, late in season, and in bad state, at the Ohio Pom. Convention, as "Trenton Early." We this year received specimens of it through the kindness of Dr. Warder, when in season.



Fruit, medium to large; *form*, roundish, rather deeper than wide, *color*, yellow on green, suffused slightly underneath skin, and with many small greenish dots that become russety in sun; *stem*, medium to long; *cavity*, round, shallow, regular; *calyx*, closed; *basin*, round, moderately deep, slightly furrowed or crimped at base of calyx; *flesh*, yellowish white, very rich, sweet, hardly tender; *core*, medium, round, ovate; *seeds*, abundant, ovate pointed. As a baking fruit, or to grow for stock feeding, this is unsurpassed. *Season*, July and August.

Golden Ball.

Belle et Bonne, | Connecticut Apple.

The origin of this variety is somewhat in doubt, but it is probably a native of Connecticut, from whence it has been largely distributed East. The trees do not bear well while young, but improve as they advance in years. Tree, hardy, forming a large round head, with large, glossy, rich green foliage; exceeding valuable for cooking; requires a rich, strong, heavy soil.

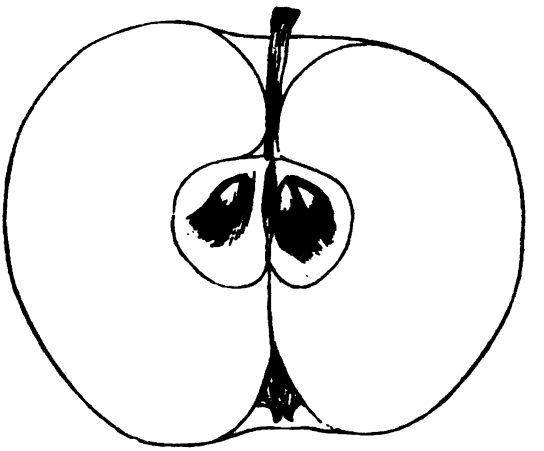
Fruit, large; *form*, roun lish, narrowing to the eye; *color*, rich

yellow, sometimes a faint blush near the stalk, and with rough dots; *stem*, short, stout; *cavity*, broad; *calyx*, half closed; *basin*, shallow; *flesh*, yellowish, tender, sub-acid, nearly acid, perfumed; *core*, medium; *seeds*, large, and plump. *Season*, October to December.

The Belle Bonne of Lindley is quite another fruit, and should not be confounded with this.

Green Sweet.

Honey Greening.



Tree, hardy, productive, half spreading, shoots rather slender, fruit valuable for cooking and for stock; wants deep, rich, strong soil; fruit always fair.

Fruit, medium to large; *form*, roundish; *color*, dull greenish white or yellow, with greenish white, or sometimes pale russet dots; *stem*, varying; *cavity*, narrow, russeted; *calyx*, above medium size for the fruit, closed; *basin*, medium, slightly furrowed; *flesh*, greenish white, tender, juicy, and quite sweet; *core*, medium, round; *seeds*, ovate. *Season*, December to March. Grown in Indiana, it is large, has a brownish cheek, and matures in October and November.

Gravenstein.

Ohio Nonpareil, | Grave Elije.

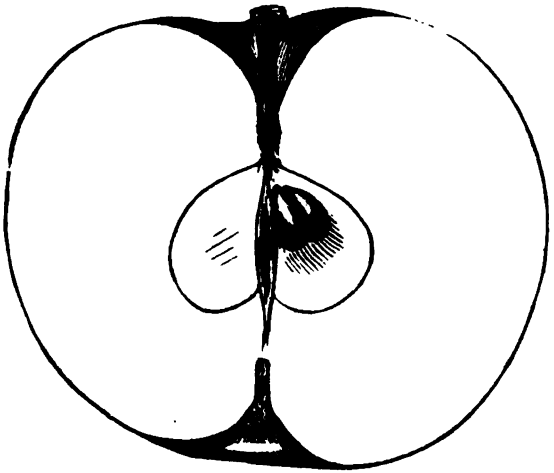
Foreign. A variety indispensable to every collection, succeeding finely on all soils, annually productive, fruit always fair, fit for cook

ing in August, and eating in September and October; shoots strong, smooth, upright. Tree large, regular, round head, foliage broad.

Fruit, large; *form*, roundish, flattened, a little irregular, somewhat ribbed, on surface undulating; *color*, at first pale greenish, yellow ground, becoming rich yellow, beautifully striped, and splashed with bright red; exposed to sun, red prevails, and becomes of a dark hue, beautiful, few faint light green dots; *stem*, short; *cavity*, open, deep; *calyx*, with open half reflexed segments; *basin*, rather deep, irregular, ribbed; *flesh*, yellowish, crisp, tender, subacid, with a peculiar aromatic taste; *core*, large, capsules open, hollow; *seeds*, ovate pyriform, reddish brown.

HARVEST.

Early Harvest,	Early June,
Yellow Harvest,	July Pippin,
Prince's Harvest,	Large White Juneating,
Early French Reinette,	Yellow Juneating.

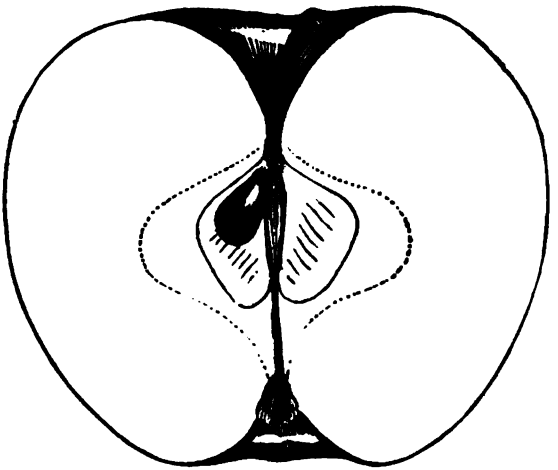


American. Universally esteemed, requires a soil well supplied with lime and potash, otherwise the fruit is unfair. Shoots erect, straight; slow growth, not successful root-grafted as an orchard tree.

Fruit, medium; *form*, roundish, rarely a little flattened; *color*, pale light yellow, with a few dots of white; *stem*, medium length, rather slender, often short, and a little stout; *cavity*, open, deep, regular; *calyx*, closed; *basin*, shallow, slightly furrowed; *flesh*, white, tender, juicy, crisp, sprightly, sub-acid; *core*, medium; *seeds*, abundant, light brown, ovate. *Season*, July.

Herefordshire Pearmain.

Winter Pearmain, erroneously, Royal Pearmain, | Parmin Royal, Old Pearmain, Royale d'Angleterre.



Foreign. Tree, hardy, requiring rich, strong soil, when the fruit is of the highest excellence; shoots slender, diverging, partially drooping.

Fruit, medium; *form*, roundish, conical; *color*, brownish red, mottled, and slightly striped, on a dull russety green, or when fully matured, yellow ground, with stripes and marblings of russet, from the stem, dotted with greyish specks; *stem*, slender; *cavity*, acuminate, russeted; *calyx*, open; *basin*, medium; *flesh*, yellowish, tender, mild, sub-acid, aromatic; *core*, medium, laying nearest the stem end; *seeds*, large, ovate, light brown. *Season*, December to February.

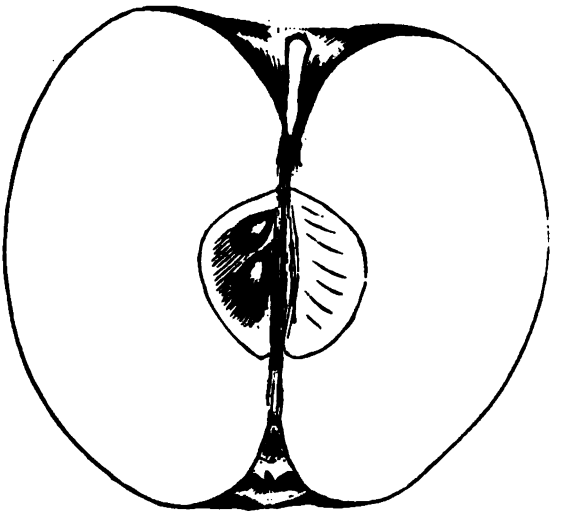
Sutton.

Hubbardston Nonsuch, Sutton, | Sutton Beauty.

American. Originated in Mass. A superior fruit, succeeding even better when grown West, than in its native locality. Tree, vigorous grower; shoots, rather slender, very different from the Baldwin, which has often been disseminated as this variety; spreading; very productive.

Fruit, large, West very large; *form*, roundish ovate, very regular; *color*, yellow ground, mostly overspread, and partially striped with rich red; *stem*, short; *cavity*, narrow; *calyx*, with short open segments; *basin*, deep, round, rarely ribbed; *flesh*, yellowish, mild, sub-acid, juicy. *Season*, October to February.

JERSEY SWEETING.



American. Succeeds in all localities, and produces abundantly of fair fruit in all soils, warm, sandy ones giving a closer texture, and more character to the flesh. Shoots stout, short-jointed, reddish. Tree, spreading, round head. For dessert, cooking, or stock, valuable.

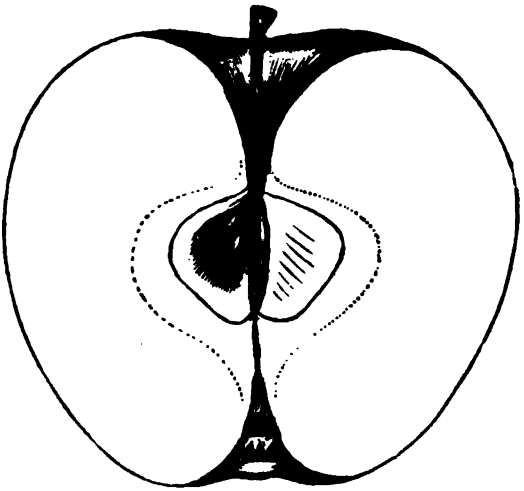
Fruit, medium; *form*, roundish ovate, tapering to the eye; *color*, greenish yellow, marked and streaked, often nearly covered with stripes of pale and dull red; *stem*, short; *cavity*, narrow; *calyx*, half closed; *basin*, not deep, sometimes slightly furrowed; *flesh*, white, fine-grained, juicy, tender, sweet; *core*, rather open, medium, round, ovate; *seeds*, full, ovate pointed. *Season*, September, and October.

JONATHAN.

Philip Rick, | Wincsap, *synon.cous'y.*
King Philip, | Wine, "

American. Originated Kingston, N. Y. Shoots, light brown,

slender, diverging; when grown and fruiting, tree has a drooping and pendent habit; very productive; needs rich, strong soil.



Fruit, medium; *form*, roundish, conical, regular; *color*, light yellow ground, mostly overspread, streaked, or stained with rich light red, and with few minute white dots; *stem*, rather long, slender; *cavity*, open, wide; *calyx*, small, nearly closed; *basin*, shallow, slightly furrowed; *flesh*, yellowish white, tender, juicy, slightly acid unless fully matured, when it is sub-acid, sprightly; *core*, medium; *seeds*, full, abundant, dark brown. *Season*, December to February.

Lady Apple.

Api, | Pomme Rose,
Petit Api, | Pomme d'Api Rouge,
Pomme d'Api, | Petit Api Rouge,
Gros Api Rouge.

Foreign. Trees very upright, forming almost pyramidal heads, like that of a pear tree, producing the fruit in clusters; require to be ten or more years old, ere bearing much, after which, very productive. Shoots, very dark color, straight, erect, leaves small; appears to succeed in all soils, and the fruit, though small, from its beauty, always commands a high price.

Fruit, small; *form*, flat; *color*, brilliant red, on light, clear yellow; very glossy; *stem*, short; *cavity*, deep; *calyx*, small; *basin*, furrowed; *flesh*, white, crisp, tender, juicy; *core*, small. *Season*, December to May.

Ladies' Sweeting.

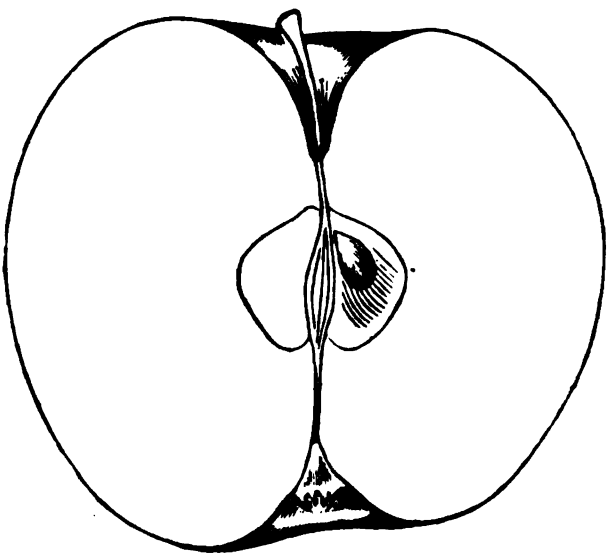
American. We have repeatedly fruited and met with this variety West, where it seems generally to succeed, but neglecting to make, or having lost our description, we copy that of Mr. Downing, who first introduced and disseminated the variety: "Wood, not very strong, grows thriftily, bears abundantly."

"*Fruit*, large, roundish ovate, narrowing rapidly to the eye; *skin*, very smooth, nearly covered with red in the sun, pale yellowish green in the shade, with broken stripes of pale red. The red is sprinkled with well-marked yellowish gray dots, and covered when first gathered, with a thin white bloom. There is, also, generally, a faint marbling of cloudy white over the red, on the shady side of the fruit, and rays of the same around the stalk. *Calyx* quite small, set in a narrow, shallow plaited basin; *stalk* half an inch long, in a shallow cavity; *flesh* greenish white, exceedingly tender, juicy, crisp, delicious, sprightly, agreeably-perfumed flavor; keeps without shriveling or losing its flavor, till May."

Lowell.

Orange, *of some*,
Tallow Apple,
Tallow Pippin,

Greasy Pippin,
Queen Anne,
Pound Royal, *erroneously*.



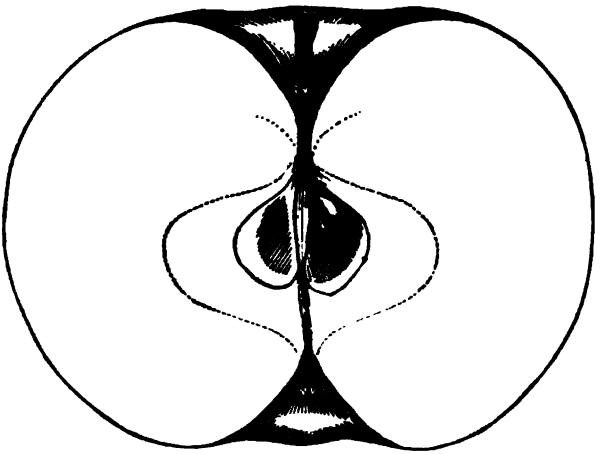
American. The early habit of productiveness, with the large fair

fruit, will always command a place in large orchards, where this variety is known. Trees, thrifty, rather strong growers, spreading, most valuable on rich heavy soils.

Fruit, large; *form*, roundish oblong, slightly conical; *color*, green, becoming rich yellow; oily surface; *stem*, long, slender; *cavity*, narrow; *calyx*, small, nearly closed; *basin*, deep, furrowed; *flesh*, yellowish white, rather coarse, sub-acid, fine aroma; *core*, medium or small; *seeds*, ovate. *Season*, August and early September.

London Sweet.

London Winter Sweet, | Winter Sweet, Heicke's Winter Sweet.



American. Much cultivated in Southern Ohio; often abundant in Cincinnati market. We have been unable to connect it with any other named variety, though it nearest resembles Broadwell. Adapted to the rich deep soils of the West; said to be productive.

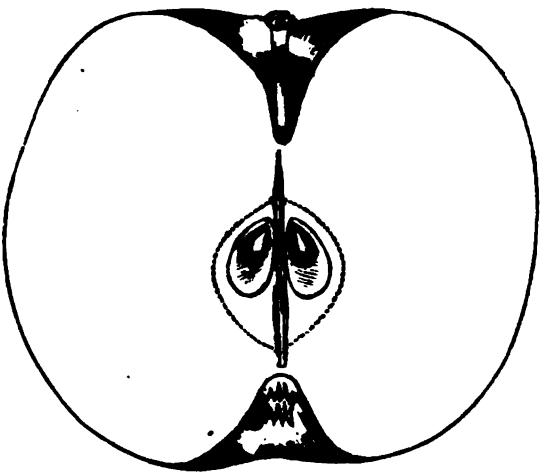
Fruit, medium, occasionally large; *form*, roundish, flattened; *color*, pale yellow, with rarely an irregular patch of bronzed russet; very smooth; grown South, has the fungus or mould, as we think, marring its beauty; *stem*, short, slender; *cavity*, open, medium depth, round, regular; *calyx*, small, closed; *basin*, deep, round, regular; *flesh*, yellowish white, juicy, tender, pleasantly sweet; *core*, rather small; *seeds*, ovate pointed. *Season*, November to January, but will keep through February.

Melon.

Norton's Melon. | Watermelon.

American. Origin questioned—whether New York or Connecti-

cut. (See Horticulturist, vol. ii., page 357.) t proves fine so far, and wherever it has been tested, and we confidently place it in the class worthy of general cultivation. Tree, vigorous, spreading; shoots, reddish brown; requires deep, strong soil.



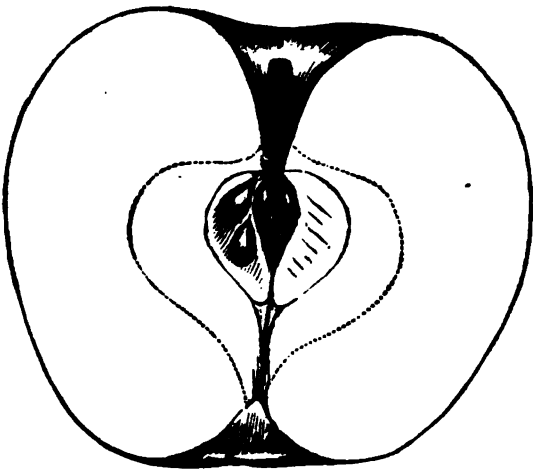
Fruit, medium to large; *form* roundish, flattened, regular; surface, glossy, uneven; *color*, pale yellowish white, much overspread with broken streaks and stripes of reddish purple, becoming rich and dark in the sun; *stem*, medium, slender; *cavity*, wide, round, open, marked with greenish russet; *calyx*, closed; *basin*, deep, finely plaited at bottom; *flesh*, white, fine-grained, crisp, tender, juicy, sprightly; *core*, rather small; *seeds*, broad, nearly black. *Season*, October to December.

Melting.

Melt in the Mouth, | Melting Mouth.

American. Origin, Pennsylvania; introduced to Ohio, and exhibited (as grown in the centre of that State) at the Pomological meetings for three years. Tree, hardy; shoots, slender, diverging; fruit borne mostly on ends of limbs; requires rich soil, abounding in lime; on young trees, fruit quite small; improves and increases as they advance in years and size, and under good culture.

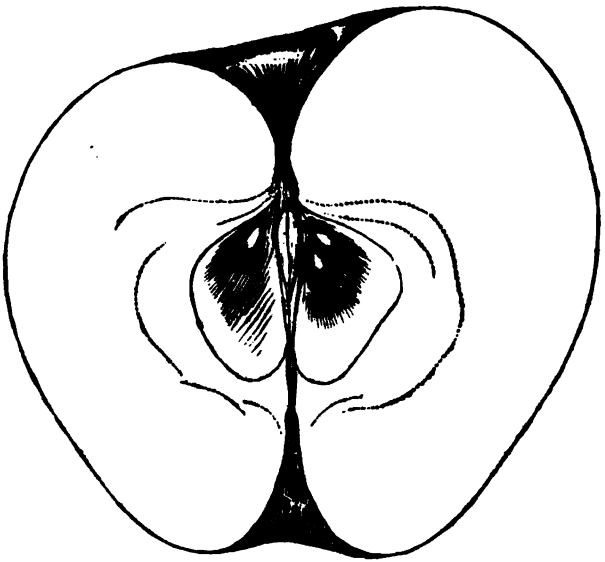
Fruit, medium; *form*, roundish, slightly flattened; *color*, yellow ground, overspread with warm yellow red, dotted and marbled with yellow russet; *stem*, short; *cavity*, deep, regular; *calyx*, with short erect segments; *basin*, shallow, broad, open; *flesh*, yellowish crisp,



juicy, tender, sub-acid; *core*, small, compact; *seeds*, long oval pointed, abundant. *Season*, January to April.

MICHAEL HENRY PIPPIN.

White Pearmain, | White Winter Pearmain.

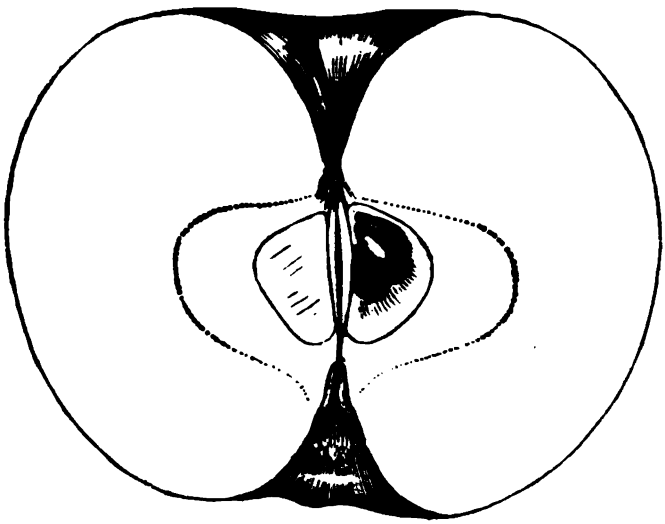


American. Native of New Jersey. It is in extensive cultivation throughout the West, and is very successful. Trees very productive.

Fruit, medium to large; *form*, angular, roundish, conical; *color*, light yellowish green, with a flush of red, in sun, dotted with irregular formed specks of russet; often there is a shade of rich yellow marbled, or striped, apparently underneath the skin; *stem*, usually short; *cavity*, narrow, regular; *calyx*, with long segments in divisions; *basin*, shallow, narrow, somewhat furrowed; *flesh*, white, tender, juicy, sweet; much valued for cooking and keeping well, being in use from October to March; *core*, small, compact, surrounded by a broad coarse vein, giving semblance of a large core; *seeds*, ovate pointed, light brown.

Monmouth Pippin.

Red Cheek, of some. | Red Cheek Pippin.



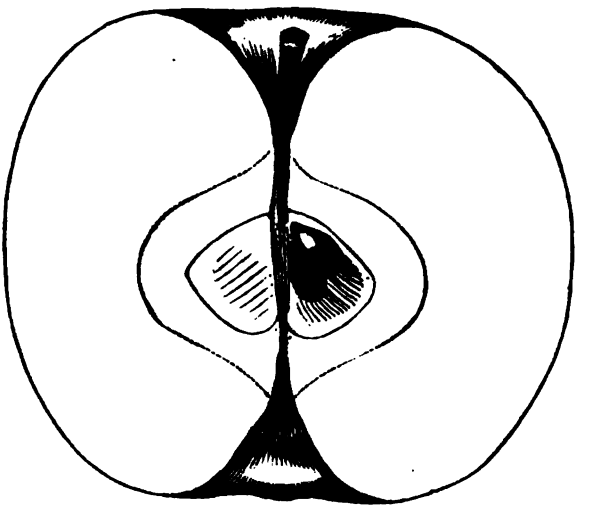
American. Native of Monmouth County, N. J. It is stated as very productive, and of healthy, vigorous growth. We are conversant only with the fruit.

Fruit, large; *form*, roundish, flattened; sometimes roundish conical; *color*, pale greenish yellow, with blush-red cheeks, small, raised rough brown specks, with a shade of light green suffused around them underneath the skin; *stem*, rather short; *cavity*, deep, regular;

calyx, medium, segments woolly and often nearly closed; *basin*, wide, abrupt, deep, much plaited; *flesh*, yellowish white, rather coarse-grained; breaking, tender, moderately juicy, sub-acid, with considerable aroma, or perfume; *core*, small, compact; *seeds*, oblong ovate, abundant. *Season*, December to February, and often till April.

Newtown Pippin.

Green Newtown Pippin, American Newtown Pippin, | Green Winter Pippin, Petersburg Pippin.



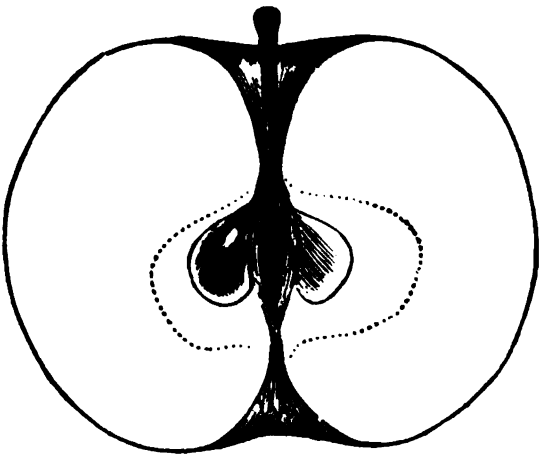
American. Native of Newtown, Long Island. It requires a rich limestone clay soil, or a warm sandy rich loam, well dressed with lime and bone dust, in order to secure healthy wood, and fair, smooth fruit. On sandy soils, abounding more or less with iron, we have never seen good fruit grown of this variety. It is distinct in fruit from the Yellow Newtown Pippin, for which see farther pages; but is difficult, if not impossible to detect one from the other by the wood. Growth slender, slow; as an orchard tree, a fine round head, with branches diverging, pendant. On the rich limestone soils of Ohio, and farther west, this and the Yellow Newtown Pippin succeed, and produce fruit even superior to the world-renowned Pell Orchard.

Fruit, medium; *form*, roundish oblong flattened; *color*, dull green when first gathered, becoming, when ripe, a yellowish green; small

minute russet dots, with occasional spots or blotches of russet, and, grown on alluvial soils south, patches of dark green mould; *stem*, slender; *cavity*, acuminate regular; *calyx*, small; *basin*, deep, abrupt, hollowed, and slightly wrinkled; *flesh*, greenish white, very fine-grained, juicy, crisp, sprightly perfumed; *core*, compact; *seeds*, dark brown, ovate. *Season*, February to May.

Newtown Spitzenberg.

Ox-Eye,
Burlington Spitzenberg,
Joe Berry.
Matchless,
Kountz,

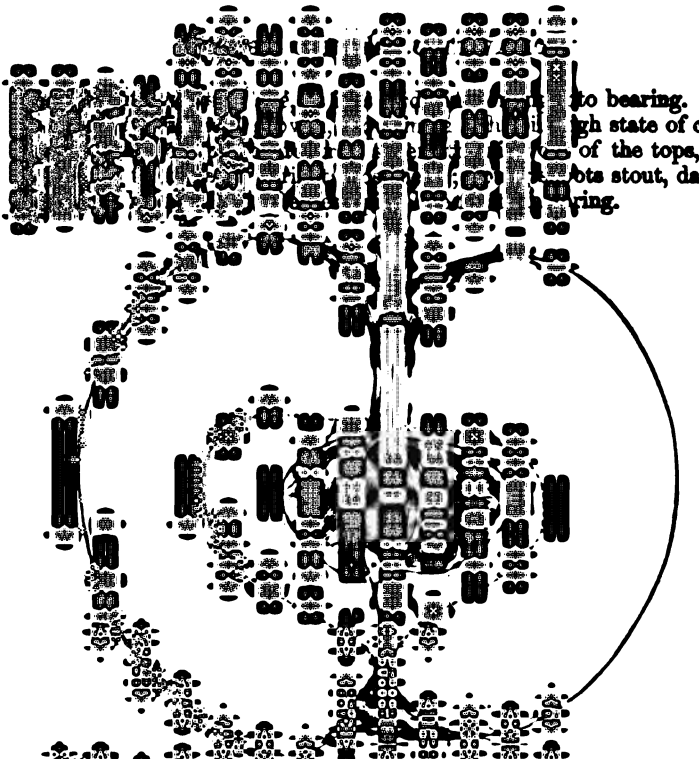


American. From Newtown, Long Island. It is extensively and successfully grown in the West as Ox-Eye, and highly estimated.

Fruit, medium; *form*, round, flattened; *color*, yellow ground, mostly striped and splashed with red, which often has appearance as of a bloom; russet dots and lines that near the calyx look like the crests of waves; *stem*, long, slender; *cavity*, narrow, deep, regular; *calyx*, small, segments erect; *basin*, open, regular, not deep; *flesh*, yellow, tender, slightly sweet, rich, aromatic; *core*, small; *seeds*, few, ovate pointed. *Season*, December to February.

Northern Spy.

American. Native of East Bloomfield, N. Y. While the quality of this variety secures it a place among first class fruit, it cannot be considered a profitable variety until the trees have acquired at



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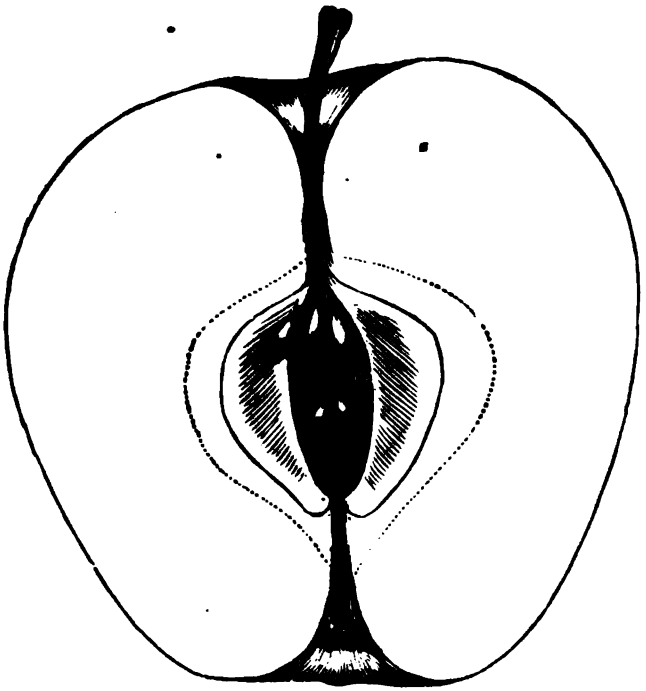
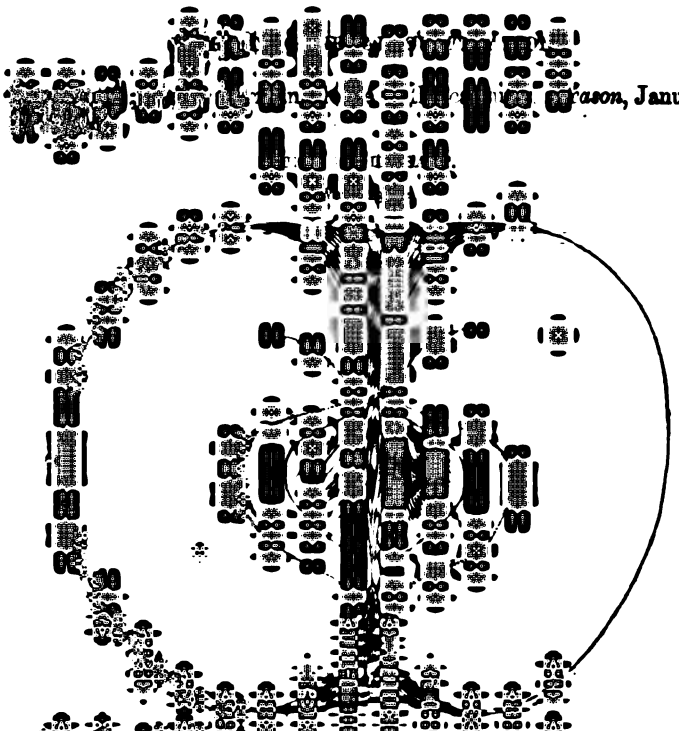
r, mostly over-
of carmine red,
; *stem*, slender,
de, deep; *calyx*,
ws produced by
yellowish white,
les open; *seeds*,
Season, January
winter variety.

bed by Lindley



as Ortley, and we therefore follow, as it is as well known by that as any other one of its names. In strong rich soils, throughout the entire Western States, it proves one of the hardiest, most productive, profitable, as well as best varieties known. In size, it is also largely increased over specimens grown North, where the form is more oblong, the texture somewhat closer, and sprightliness a little enhanced. Shoots, slender, brownish, yellow, upright, long jointed.

Fruit, large, when grown on rich soils; *skin*, smooth; *form*, oblong oval, occasionally or often roundish conical; *color*, pale yellowish white at the North—South it becomes a richer yellow, with specks of dark red, and a vermilion tinge surrounding when exposed to sun; *stem*, varying from short and stout to long and slender; *cavity*, deep, narrow; *calyx*, small, closed; *basin*, furrowed or plaited from the surrounding angles or ribs that are often apparent in the fruit; *flesh*, yellowish white, tender, crisp, sprightly, mild acid; *core*,



erect, slightly
t is of firmer
large.
ometimes very
e; *color*, when
e, a beautiful
with scattered
near the apex;
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onnecting with
basin, round,
tender, juicy,
nt, ovate, dark
often keeps to

pright, wants

ghtly flattened;

color, yellow ground, mostly overspread and mottled with red; *flesh*, yellowish, tender, juicy, crisp. *Season*, December and January. This may yet prove identical with "Richmond," described on future page.

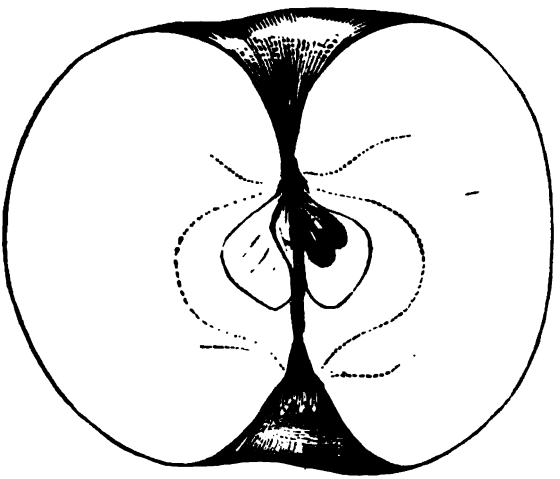
Porter.

American—native of Massachusetts. Tree slender, slow growth, a regular even bearer, requires strong soil in which there is good supply of lime and phosphates; succeeds wherever grown—one of the best at South.

Fruit, medium to large; *form*, oblong conical; *color*, bright, clear yellow—when exposed to sun, a fine blush cheek; *stem*, slender, *cavity*, shallow; *calyx*, medium, closed; *basin*, narrow, deep; *flesh*, fine-grained, juicy, firm yet tender, acid. *Season*, September and October.

Poughkeepsie Russet.

English Russet, | Winter Russet?



As this variety, described by Downing as the "English Russet," is probably an American seedling, and as there are so many sorts known under the general term of English Russet, we prefer to adopt the name of Poughkeepsie Russet, as commemorative of the section whence it was first disseminated. Growth, upright. Shoots, lively brown, profuse bearer, and although only of medium size, its quality of keeping over year renders it very profitable. There is also another called "Crow's Nest," sometimes sold under this name,

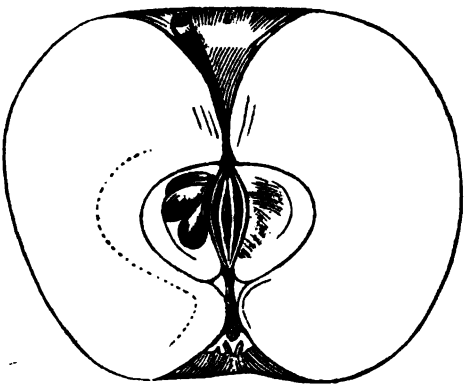
of which the fruit is larger, does not keep as well, and the tree when grown makes a dense top.

Fruit, medium; *form*, roundish conical, or roundish ovate, regular; *color*, light greenish yellow, mostly overspread with brownish russet, when well matured, becomes yellowish; *stem*, rather short; *cavity*, round; *calyx*, small, close; *basin*, abrupt, regular, round; *flesh*, yellowish white, fine texture, rather firm, aromatic; *core*, small; *seeds*, ovate, reddish brown. *Season*, all Winter and Spring.

There is cultivated in Central Ohio, a Golden Russet (see our figure) which resembles this, but is larger, and with an open calyx, and often beautifully bronzed with russet yellow. We think they may prove identical, and the soil and location make the apparent difference.

Pomme Grise.

Grise, | Gray Apple.



A delicious little apple from Canada, that is especially adapted to Northern sections, and to gardens. It is a good bearer, of slender growth, forming a tree of small size.

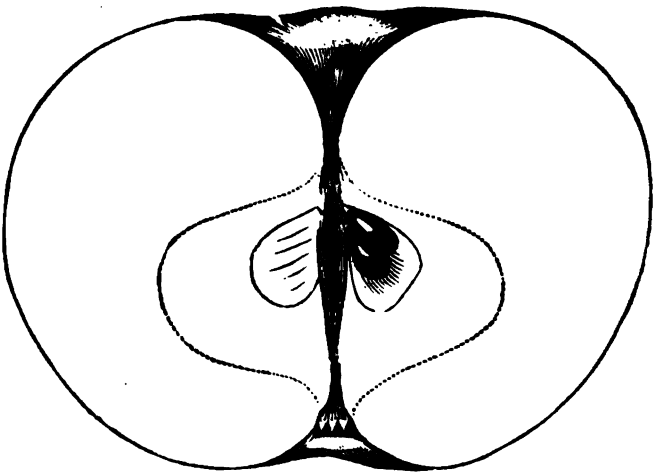
Fruit, below medium; *form*, roundish, somewhat flattened; *color*, yellow gray, or russet, with a little red towards the eye; *stem*, slender; *cavity*, deep; *calyx*, small; *basin*, round; *flesh*, yellow, tender, sprightly; *core*, medium; *seeds*, abundant. *Season*, December to February.

Pryor's Red.

Prior's Red, Big Hill. | Pitzer Hill,

This is evidently a seedling from seed crossed with Westfield Seek-no-further and Roxbury Russet, partaking most largely of the

Seek-no-further. Its certain origin we have not learned. It is not regarded as an early bearer, but as very hardy and the fruit keeping well when grown South, and on rich alluvial soils. Grown at the North, the trees come into bearing at about eight years, and the fruit has very little russet (unless unusually warm seasons), except at stem end; South, in good culture, it attains a size of four inches diameter, by three inches from stem to eye, and mostly covered with russet.



Fruit, medium to very large; *form*, at North, regular, roundish, tapering to the eye—South, always angular, sometimes even broad at apex, being roundish, angular, flattened; *color*, pale yellow, ground mostly overspread with rich, warm red and russet, marbled and splashed with bronzed yellow near the stem, dark yellow russet spots surrounded with a lighter shade; *stem*, short; *cavity*, narrow; *calyx*, small, segments erect; *basin*, abrupt, pretty deep, round and even, occasionally shallow; *flesh*, yellowish, tender, mild, sub-acid, much resembling Westfield Seek-no-further; *core*, medium, marked at distance with a line encircling; *seeds*, varying, generally ovate. *Season*, January to April.

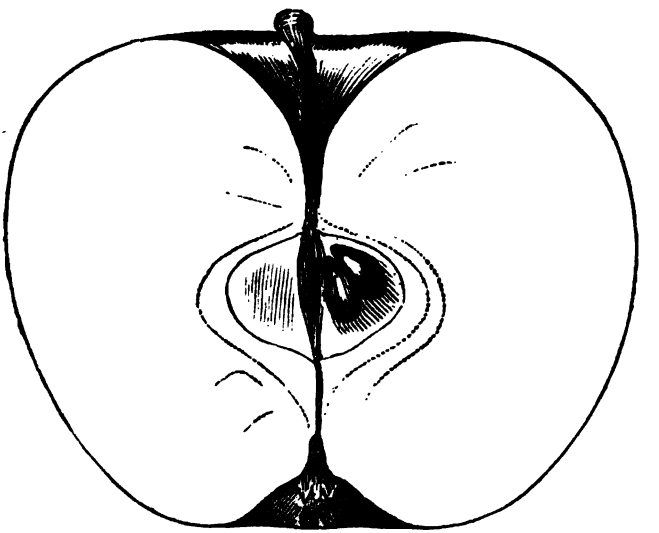
Raule's Janet.

Raul's Gennetting, Rawl's Janet, Winter Genneting, Rock Remain, Jennette, | Raule's Jannette, Rawle's Jennette, Rock Rimmon, Neverfail, Yellow Janette,

Indiana Jannetting.

This variety, according to H. P. Byram, Esq., was first brought to

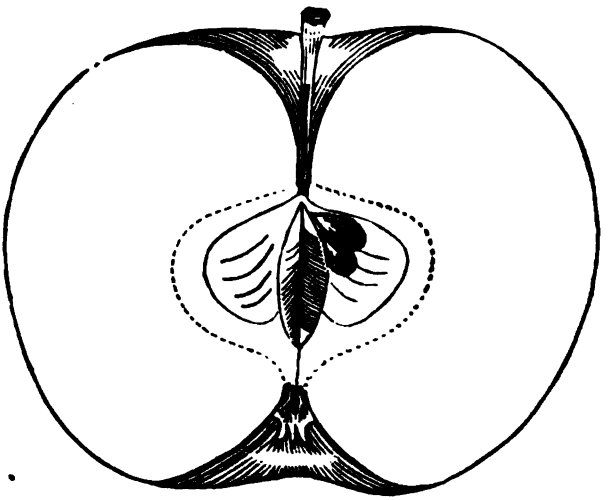
the south-western sections, from Amherst Co., Va., near the Blue Ridge, where it was originated by Caleb Raules, who named it Janet, hence the name. According to Geo. Hoadley, Esq., Gov. Worthington had it in his orchard 40 years since, and from thence it was brought to northern Ohio. The Scriptural name of Rock-Rimmon, given it in the Sciota valley, was probably on account of its sure bearing, and long keeping qualities. The tree is tardy in spring in leaving out, and blossoms some ten days after other varieties; thus often escaping late Spring frosts. In quality it is only second rate, and at the North is not desirable, but south of Cincinnati is highly so, as it succeeds when many others fail.



Fruit, medium to large; *form*, roundish, conical, flattened at stem end; *skin*, thick, tough; *color*, a ground of light pale yellowish green, mostly overspread, striped and stained with dull red, and with a blue or grayish shade laying within as of a bloom; small russet dots, that show most when the fruit is high colored; South many patches of mould or fungus; *stem*, slender, rather long; *cavity*, deep, regular; *calyx*, nearly closed, short segments; *basin*, open, regular, not deep, sometimes slightly furrowed near the calyx; *flesh*, yellowish, tender, mild, sub-acid; *core*, medium; *seeds*, angular ovate. *Season*, late spring

Rambo.

Romanite, Bread and Cheese Apple. | Seek-no-further, Terry's Red Streak.



American. A native of Delaware, it succeeds in all soils and locations, and has no superior, as a whole, in the general estimation. It succeeds on sandy soils, but the largest and best fruit is grown on strong limestone soils, giving evidence of the food suited best to it.

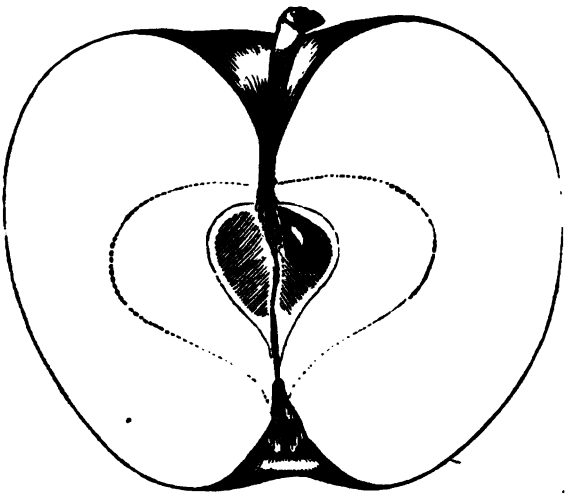
Fruit, medium; *form*, flat, or roundish flattened; *color*, yellowish white, marbled and streaked with yellow and red, and with large rough spots; *stem*, long, slender, often curved; *basin*, acuminate; *calyx*, nearly closed; *basin*, broad, slightly furrowed; *flesh*, greenish white, tender, sprightly, mild, sub-acid; *core*, large, rather hollow; *seeds*, abundant, ovate pyriform. *Season*, October to December, but often keeps to March.

Red Canada.

Old Nonsuch, | Richfield Nonsuch.

American. Probably a native of Massachusetts. Tree, slender growth; shoots diverging; requires rich strong soil, when it is productive; and always fair and uniform size of fruit. One of the most valuable for orchard or garden.

Fruit, medium; *form*, roundish, conical, flattened at stem end; *color*, rich clear yellow ground, when exposed to the sun, overspread with bright handsome red, two shades light and dark intermingling,



or striped, many light gray dots presenting at first sight an appearance of a somewhat rough exterior; *skin*, thin, tender; *stem*, varying from short and stout, to slender and long, usually as seen in our figure; *cavity*, deep, regular, a touch of light russet; *calyx*, small, closed; *basin*, open, moderate depth, slightly furrowed, or uneven; *flesh*, yellowish white, crisp, tender, juicy, sprightly, sub-acid, aromatic; *core*, small, compact; *seeds*, ovate, pyriform. *Season*, January to April.

Red Astrachan.

Foreign. Most valuable as a hardy, strong grower, regular moderate bearer of fruit always fair. As a dessert fruit—it is rather acid, unless fully ripe; but for marketing or cooking, it has few equals, at its time. Shoots stout, dark brown, broad foliage.

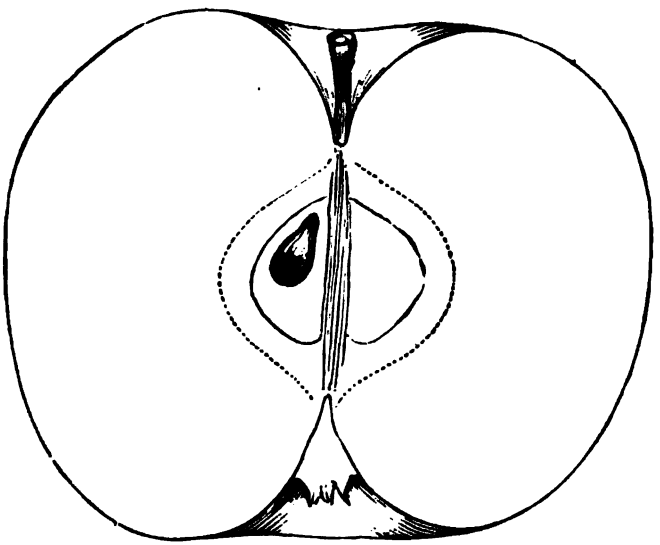
Fruit, medium, to large; *form*, roundish, tapering toward the apex; *color*, greenish yellow, mostly overspread with rich purplish crimson, a little russet near the stem, and a white bloom; *stem*, varying, generally short; *cavity*, narrow; *calyx*, large; *basin*, shallow, uneven:

te, dark brownish
Conn.

This variety has been condemned in many sections because of not producing as fine fruit on the same trees without care, as when the trees were young. Testimony has shown that it is a gross feeder, and needs soil well drained, rich in lime and phosphates; on usual soils, where the variety is defective, liberal dressing with wood ashes, will answer. On sandy soils well manured, the texture is closer than on clay.

Fruit, large; *form*, roundish, flattened, sometimes a little angular at the base end; *color*, green, yellowish green when ripe, with a dull blush, on sun-grown specimens, near the stem; *stem*, medium; *cavity*; open; *calyx*, rather small, woolly; *basin*, medium depth, slightly furrowed; *flesh*, yellowish, fine-grained, tender, slightly aromatic, lively acid juice; *core* small; *seeds* ovate, pointed. *Season*, December to Februarv.

RICHMOND.



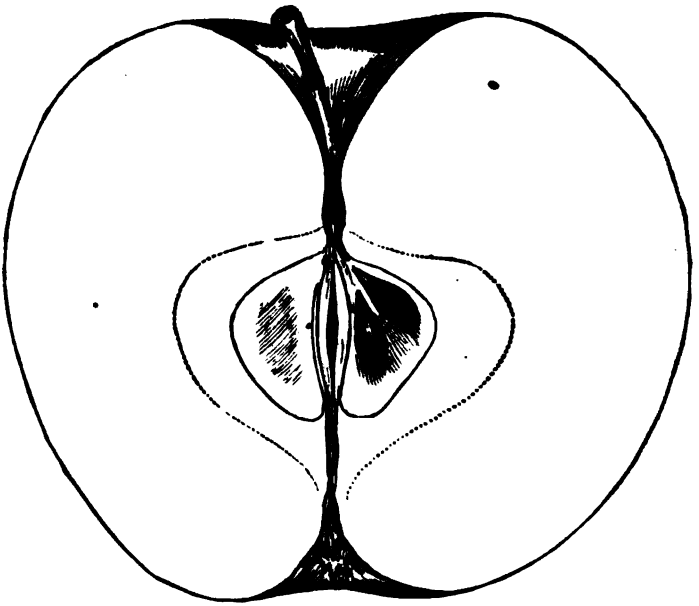
We received this fine variety from D. C. Richmond, Esq., near Sandusky, as a native seedling, and are unable to identify it with any known sort.

Fruit, large; *form*, roundish, occasional specimens have one side a little enlarged; *color*, light yellow ground, mostly or quite overspread with light and dark red stripes, many dots or specks of light russet; *stem*, varying, mostly short, slender; *cavity*, deep, open, regular, a little brownish at bottom; *calyx*, large, segments,

long; *basin*, deep, open, uniformly furrowed; *flesh*, white, tender, juicy, delicate sweet; *core*, medium; *seeds*, large, full. *Season*, October to December.

Rome Beauty.

Roman Beauty, | Gillett's Seedling.



American. Native of Southern Ohio. In fruit and tree it somewhat resembles Sutton; requires, to perfect good fruit, a rich, warm, loamy soil. On poor clay, it is undersized, deficient in character, and inclined to overbear.

Fruit, large; *form*, roundish; *color*, rich light yellow, mostly overspread and striped with shades of clear bright red; *stem*, slender; *cavity*; open, regular; *calyx*, nearly closed, segments distinctly separate; *basin*, round, open, moderately deep; *flesh*, yellow, crisp, mild, sub-acid; *core*, medium, somewhat hollow; *seeds*, long, ovate, large and full. *Season*, October to December.

Roxbury Russet.

Boston Russet, | Putnam Russet,
Marietta Russet. | Belpre Russet,
Sylvan Russet.

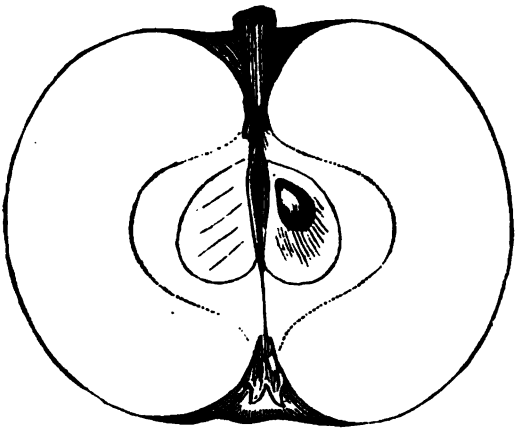
American. Origin uncertain, either Connecticut or Massachusetts.

It was introduced to the Ohio Valley, in 1796 or '97, by Israel Putnam, and from thence distributed throughout the southwest. It is a thick-skinned fruit, generally a good keeper, but hardly above second rate in quality; grown on rich prairie soils, it is sometimes liable to "bark burst" near the ground, but elsewhere perefectly hardy, and very productive. Spreading growth, with rather downy shoots; young trees often crooked.

Fruit, medium, to large; *form*, roundish, flattened, and often angular; *color*, dull green, overspread with brownish yellow russet, occasionally a faint blush on the sunny side; *stem*, slender; *cavity*, medium; *calyx*, closed; *basin*, round, moderate depth; *flesh*, greenish white, moderately juicy, mild, sub-acid; *core*, compact; *seeds*, ovate, defective. *Season*, January to June.

Summer Rose.

Wolman's Harvest, | Woolman's Harvest, Lippincott.

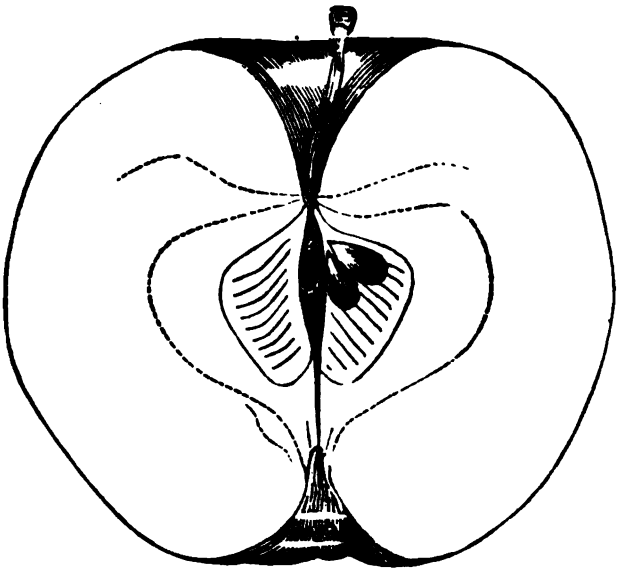


This variety is not valuable for market purposes, but its juicy, sprightly sub-acid character makes it very desirable for the dessert. Tree, a slow grower, diverging—shoots downy; requires rich, strong soil, lime and phosphates to perfect the fruit, or keep the tree healthy. Moderate, regular bearer.

Fruit, medium, or rather small; *form*, roundish, sometimes flattened; *color*, rich glossy yellow, blotched and streaked with red; *stem*, varying from stout to slender, short; *cavity*, shallow; *calyx*, partially closed; *basin*, round, slightly furrowed; *flesh*, white, tender

crisp, juicy, sprightly; *core*, medium; *seeds*, ovate. *Season*, last of July and August.

SWAAR.

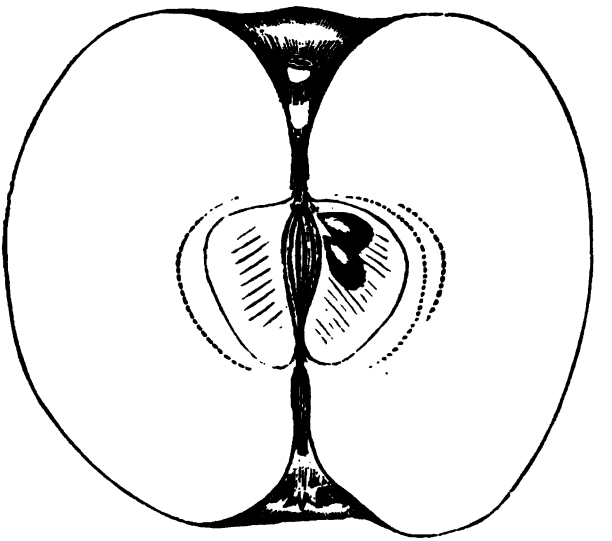


American, "produced by the Dutch settlers, on the Hudson; its name in low Dutch meaning heavy." On all warm, rich, sandy soils it is one of the very finest fruits, and a good keeper. On cold clayey grounds it does not succeed well, as a general thing; the past year, however, we have received of it grown on clay loam, limestone subsoil, equalling or surpassing any ever grown on sand. On the rich prairie soils of the west, it is said to succeed, proving a good bearer and profitable.

Fruit, medium, to large; *form*, roundish, slightly ribbed or unequal on its surface and often a little angular; *color*, greenish yellow at first, becoming a dull rich yellow, dotted with distinct brown specks, sometimes marbled with gray russet on the side and round the stem, and often tinged with dull red; *stem*, slender; *cavity* round, deep; *calyx*, small, half closed; *basin*, shallow, somewhat plaited; *flesh*, yellowish, fine grained, juicy, tender, spicy aromatic perfume; *core*, small, to medium; *seeds*, broad, ovate. *Season*, January to March.

Sweet Bough.

Bough,	Sweet Harvest,
Early Sweet Bough,	Washington,
Large Yellow Bough,	Niack Pippin.

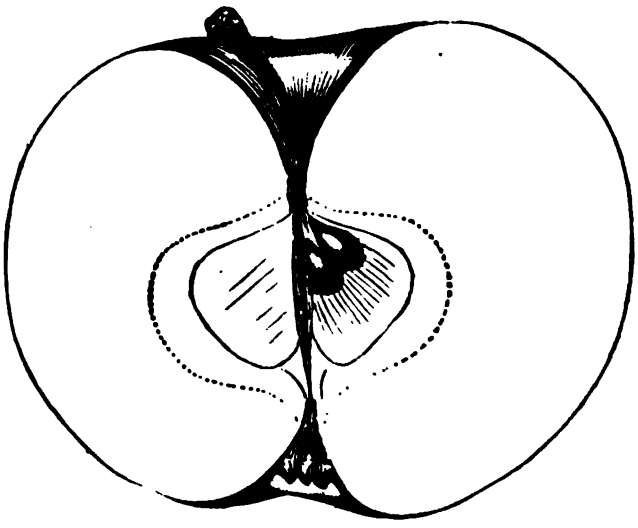


American. First described by Coxe as Bough; we add, Sweet, as expressive of its character. Valued as a dessert fruit. Young shoots, yellowish, somewhat irregular, ascending. Tree, a moderate, annual bearer, succeeding in all good soils not wet.

Fruit, large, (our figure hardly medium;) *form*, roundish, conical, ovate; *color*, greenish, becoming pale yellow when fully ripe; *stem*, varying in length; *cavity*, deep; *calyx*, open; *basin*, narrow, deep; *flesh*, white, tender, crisp, sprightly, sweet; *core*, medium, open capsules; *seeds*, ovate, light brown. *Season*, August.

Sweet Pearmain.

This variety, according to Downing and Thomas, is the "English Sweeting;" but according to Mr. Manning, the "English Sweeting" is the "Ramsdell's Sweeting," of Downing, (See Hovey's Mag. vol. 2. page 150.) This variety is extensively grown in central Ohio,



and farther west, suiting well the rich soils; keeping finely all winter; highly valued for baking or eating.

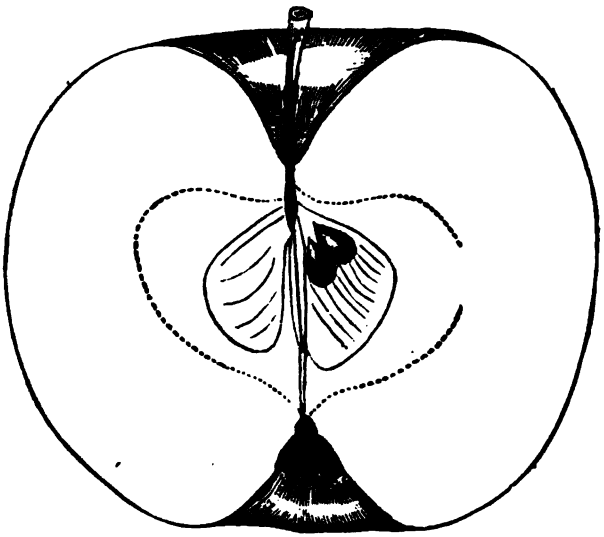
Fruit, medium size or often above; *form*, roundish, slightly angular; *color*, dull red, rough russet dots and bluish bloom; *stem*, long, slender; *cavity*, deep wide and open; *calyx*, woolly; *basin*, medium; *flesh*, yellowish, tender, moderately juicy, sweet; *core*, medium, with outer or consecutive lines; *seeds*, ovate, pyriform, dark brown. *Season*, December to March.

Talman's Sweeting.

Talhman's Sweeting, | Tolman's Sweeting,
Brown's Golden Sweet.

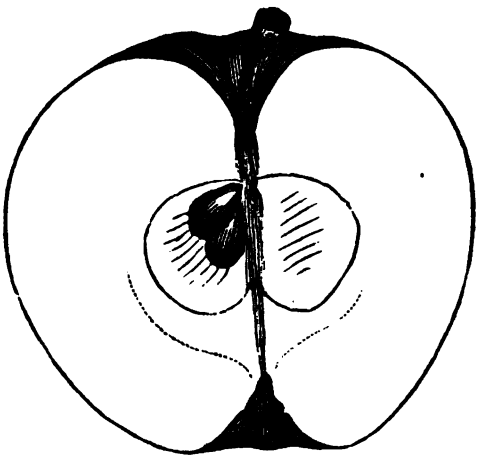
American. Native of Rhode Island; its name from a family by name of Talman. Its value is for baking and stock feeding. Tree, great bearer, fruit keeping well; growth rapid, upright, strong, wood dark.

Fruit, medium; *form*, roundish, slightly conical; *color*, light yellow, with a greenish line from stem to apex; *stem*, long, slender; *cavity*, wide, regular; *calyx*, medium; *basin*, moderate depth, fur-



rowed; *flesh*, white, firm, very sweet; *core*, medium; *seeds*, light brown, ovate pointed. *Season*, November to April.

TETOFSKY.



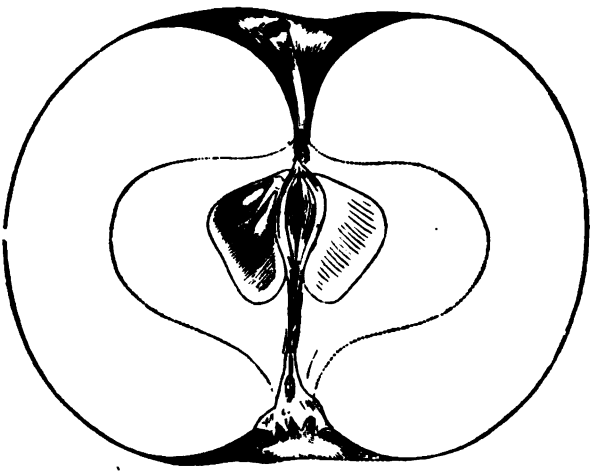
A Russian variety. Trees, very stout and upright growth; leaves large, broad, light green, peculiar; regular annual bearer; in quali

ity about with Red Astrachan, but maturing some ten days or two weeks earlier; very valuable for cooking or marketing; a gross feeder, requiring good soil; needs little pruning. Our figure does not well represent it, being far too small for an average.

Fruit, medium; *form*, roundish, slightly conical; *color*, light yellow ground, striped and splashed with red, and a beautiful white bloom; *stem*, short, stout; *cavity*, deep, furrowed; *calyx*, rather large, long segments; *basin*, abrupt, deep, irregular, furrowed; *flesh*, white, tender, sprightly, juicy, slightly acid, or sharp sub-acid, with a peculiar aromatic taste; *core*, small, fleshy; *seeds*, plump, light brown. *Season*, last of July.

Sweet Romanite.

Sweet Nonsuch, | Orange Sweet, erroneously,



This is a variety introduced to the Ohio Pomological Society by W. B. Lipsey, of Morrow County, Ohio. We have not been able to identify it with any variety heretofore described. The flesh being fine grained and firm—somewhat like the Gilpin or *Romanite*—probably induced the name. It is grown in Illinois, under name of "Sweet Nonsuch," and introduced there under the erroneous name of "Orange Sweet." Tree, hardy, moderate but regular bearer.

Size, medium; *form*, roundish flattened, very regular; *color*, greenish yellow ground, mostly striped and overspread with bright red and covered with a fine bloom; *stem*, short; *cavity*, open, regular, with little russet; *calyx*, large, segments in divisions, short, half erect; *basin*, broad, shallow, furrowed; *flesh*, greenish yellow, firm.

crisp, juicy, sweet—superior to Ramsdell's or Danvers' Sweeting; *core*, medium, or rather small, compact—centre slightly hollow; *seeds*, ovate, oblong, pyriform. *Season*, November to March.

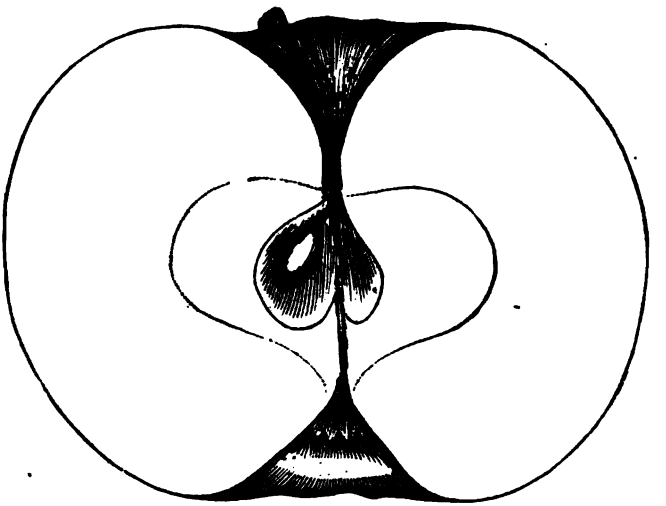
There is another Sweet Romanite grown in the Western States, which is oblong; *stem*, long and slender; *color*, light yellow, striped with red; *flesh*, more yellow and dry—an inferior or unworthy variety.

There is also a Sweet Nonsuch grown which is flat, with slender *stem*; *cavity*, deep light red on pale yellow; *flesh*, white, sweet, dry, and tough; inferior.

VANDERVERE.

Vandervere, of Cincinnati,
Smokehouse?
Gibbon's Smathhouse?
Millcreek,
Vandervere Pippin
Red Vandervere,
Fall Vandervere,
Yellow Vandervere,
Spiced Ox Eye,

Baltimore, *of some incorrectly*,
Gibbon's Smokehouse?
Striped Ashmore?
Millcreek Vandervere,
Imperial Vandervere,
Pennsylvania Vandervere,
Striped Vandervere,
Staaiclubs,
Watson's Vandervere.

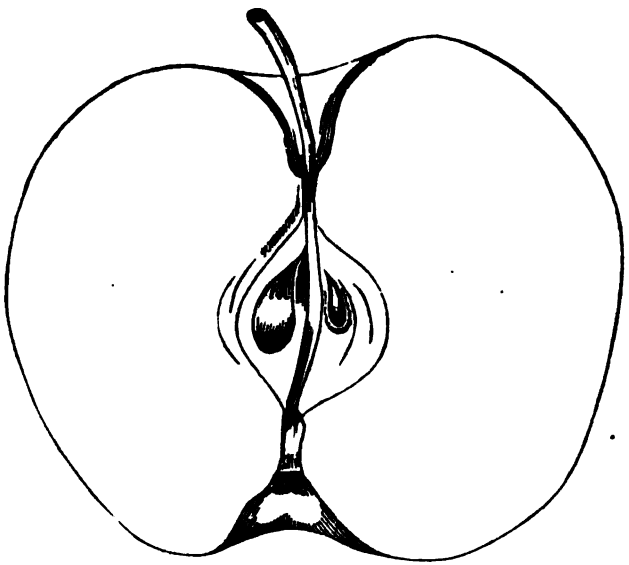


American. Native of Delaware. There is much confusion relative to this apple, and, while it is extensively distributed and grown, it has numerous synonyms. The variety described as "Smokehouse," by Dr. W. D. Brinckle, in Horticulturist, vol. 3, p. 334, we received specimens of, last winter, from Pennsylvania, and could detect no difference from the Vandervere when well grown. It may,

however, be distinct. The tree is a free grower, productive, and early bearer. Grown on soils deficient in lime, like many of our western bottoms, and some of prairie; it has always more or less of dry bitter rot, but, when supplied with lime, the rot disappears, and the fruit increases in size and improves in quality; needs good culture. Grown North, it is smaller in size and much more conical, and less highly colored than South. Young shoots spotted.

Fruit, from medium to large; *form*, round flattened, sometimes angular; *color*, orange yellow, striped and stained with yellow red, few streaks of deeper red when grown exposed to sun, dotted at intervals of a quarter to half inch with large yellow russet specks; when grown North, these specks are more of gray and much smaller, often russeted about the stem; *stem*, projecting about even with surrounding surface; *cavity*, deep, open, regular; *calyx*, with small segments; *basin*, open, broad, sometimes slight waves or furrows; *flesh*, yellowish white, crisp, tender, sprightly, mild sub-acid; *core*, round, compact; *seeds*, large, ovate pyriform. *Season*, December to February.

WAGENER.

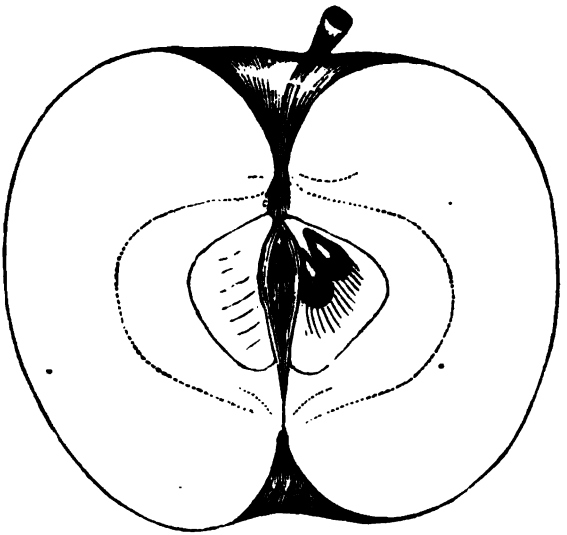


American. "Origin, Penn Yan, Yates County, N. Y.; seed sown in 1791. Tree, thrifty; young shoots, pale green; old wood, dark red, requires free trimming in order to produce large sized fruit abundantly; annual bearer."

Fruit, medium; *form*, roundish, flattened, slightly ribbed at base; ***color***, yellow ground, mostly covered with deep glossy red, with stripes and splashes of light red, and marked with irregular light russet specks; *stem*, slender; *cavity*, wide, deep; ***calyx***, small; ***basin***, broad and open; *flesh*, yellowish white, fine grained, crisp, juicy, sprightly, vinous, sub-acid; *core*, small, oblong ovate; ***seeds***, light brown, ovate pyriform. *Season*, November to March, but will keep to May.

WESTFIELD SEEK-NO-FURTHER.

Connecticut Seek-no-further, | Seek-no-further.
Red Winter Pearmain *of some.*



An old variety from Connecticut. For all qualities of tree and fruit has no superior. Very popular in its native State, all South and West. Grown in rich loamy alluvial soils of the South, it is much russeted, and about the stem the russet has appearance of rich bronze; progressing northward, it gradually loses its russet, until on light sandy soils in Michigan, it becomes a pale yellow ground, with stripes and splashes of clear red and minute dots.

Fruit, medium; *form*, regular, roundish, conical—broad at base; *color*, light yellow ground, the sunny side striped and splashed with red, small russet dots shaded around with light russet yellow; often considerable russet about both stem and calyx; *stem*, long, slender; *cavity*, open, regular; *calyx*, usually small, closed, sometimes open,

with short segments; *basin*, regular form, moderate depth; *flesh* yellowish, tender, sub-acid, pearmain flavor; *core*, medium; *seeds* ovate. *Season*, December to February.

Wood's Greening.

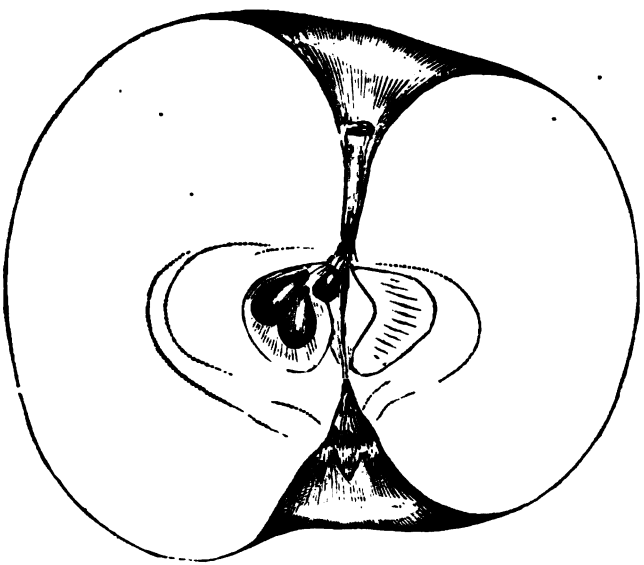
Coate's Greening.

American. Native of New-Jersey. First described by Coxe, from whose nursery it was introduced to the west by Prof. Kirtland, about 1820. Tree, hardy, slender growth, becoming somewhat spreading. It is well adapted to strong heavy soils, producing abundantly fruit of uniform medium size, and always fair and of "best" quality.

Fruit, medium; *form*, roundish, conical, flattened; *color*, pale green, becoming yellowish, with a few rough spots; *stem*, short; *cavity*, acuminate; *calyx*, rather large; *basin*, slightly plaited; *flesh*, greenish white, fine grained, juicy, tender, sprightly, sub-acid; *core*, *small*; *seeds*, ovate. *Season*, January to March.

Wine.

Wine Apple, Hay's Winter Wine, | Hay's Winter, Winter Wine, Hollow Crown Pearmain.



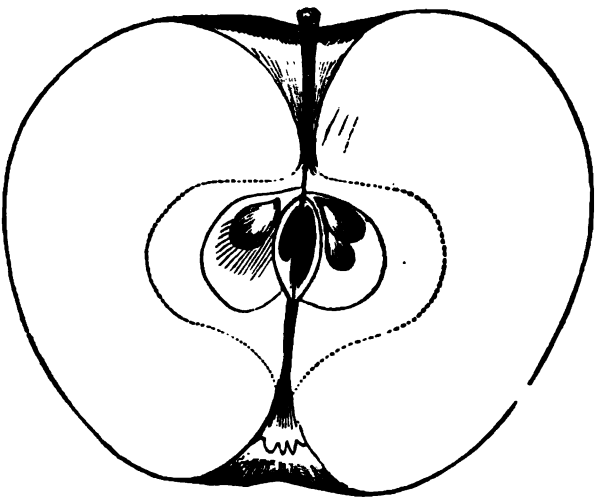
American. Native of Delaware. Extensively disseminated, and

everywhere successful. Strong heavy clay loams produce the largest fruit, while best quality are grown on sandy loam. Tree, thrifty; shoots rather slender, spreading; foliage small.

Fruit, medium to large; *form*, round flattened, often quite angular, or largest one side; *color*, light pale yellow ground, mostly overspread and striped with lively red, russet about cavity of stem; *stem*, short; *cavity*, acuminate or narrow, deep; *calyx*, large; *basin*, broad, open, slightly plaited; *flesh*, yellowish, crisp, vinous, subacid; *core*, small; *seeds*, large. *Season*, November to February.

Wine Sap.

Wine Sop.

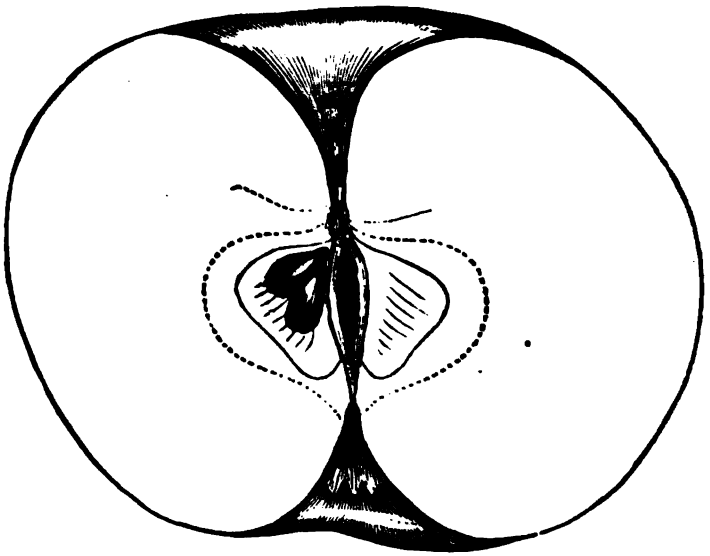


Probably originated in New-Jersey. First described by Coxe. The tree is hardy, an early and very productive bearer, irregular in its growth, not forming a handsome head, but producing fair fine fruit in all soils, from poor sand to limestone clay—largest in the latter, and finest texture in the former—fine on dry prairies.

Fruit, medium; *form*, ovate conical, flattened at base, sometimes roundish conical, occasionally angular and slightly ribbed; *color*, grown North, a bright clear red stained and striped with darker shades, and with spots of light yellow; grown South, the dark red becomes most prominent, while the patches of light yellow at base are more often seen; it is also more irregular or angular in form, and oft with russet about the stem; *stem*, varying in length, slender; *cavity*, narrow, deep; *calyx*, small, nearly closed;

basin, abrupt, furrowed; *flesh*, yellowish, juicy, tender, sub-acid, sprightly; *core*, medium, *capsule*, hollow; *seeds*, short ovate. *Season*, October to January, often keeps till March.

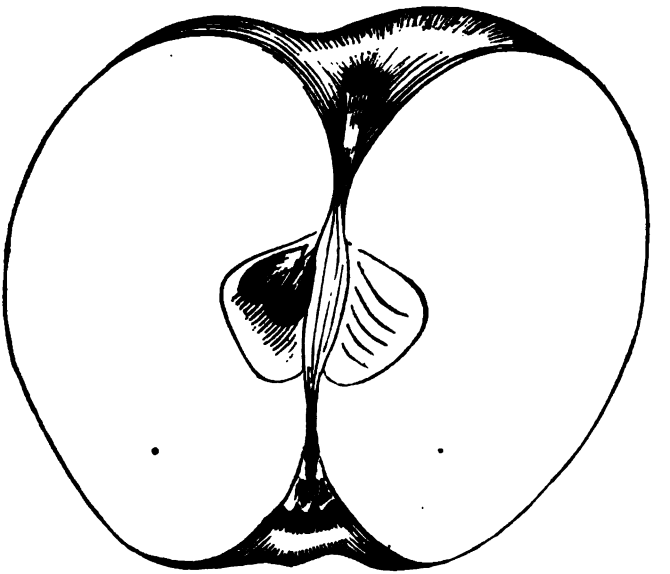
YELLOW NEWTOWN PIPPIN.



This variety is extensively grown; West it becomes large; keeps well. Trees, though slender growth, good bearers and apparently perfectly at home in rich limestone soils. That there are two Newtown Pippins, we do not question; see "Newtown Pippin;" but we have the past year supposed there might be *three*, but whether the distinction is without a difference we are yet unprepared to decide. We give here two figures, and descriptions, of which the latter Newtown Pippin of Lewis Sanders, Esq., may possibly prove identical with Y. N. P.

Fruit, medium, to large; *form* roundish, flattened, angular, or broader than long; *color*, clear yellow, with considerable russet from the stem, many small russet dots, and, where exposed to the sun, the yellow becomes very rich and dotted with carmine dots; *stem*, short; *cavity*, deep; *calyx*, large open, segments short, stiff, broad; *basin*, broad, irregular only from the slight ribbing of the fruit; *flesh*, yellowish, very firm, crisp, juicy; *core*, medium; *seeds*, purplish black, oblong pyriform. Keeps to June.

NEWTOWN PIPPIN, OF LEWIS SANDERS, KY.



Fruit, large; *form*, angular, roundish conical, prominently ribbed; *color*, dull pale yellow, with whitish yellow, marbled and splashed, the latter prevailing mostly at stem end; *stem*, short; *cavity*, acuminate, somewhat russeted; *calyx*, medium, short segments; *basin*, pretty deep, irregular, ribbed; *flesh*, yellowish white, firm, crisp, vinous, juicy, sub-acid, with tinges or lines, and specks throughout, as if decay had partially taken place; *core*, medium, or rather large; *seeds*, dark rich reddish brown, ovate, pyriform.

CLASS II. *New and untested. Adapted to certain Localities, or Amateur Gardens.*

ABBOIT SEEDLING.

American. Fruit, medium, roundish, slightly conical, dull green, tinged with red; flesh, tender juicy, wants flavor. Winter. (Hov. Mag.)

Adams.

Noll's No. 1.

A Pennsylvania seedling of White Deer township, Union County. Large; roundish oblate; faintly mottled and striped with red on a greenish yellow ground; stem, half an inch long; cavity, broad acute; calyx, rather large, segments closed; basin, wide, moderately deep, plaited; flesh, greenish white, of fine texture, rather juicy; "*very good.*" (W. D. B.)

Adam's Pearmain.

Foreign. Fruit, medium, conical, pale greenish yellow, with gray russet; stem, slender; flesh, yellowish, crisp, aromatic. Early winter. (Lindley.)

Albemarle Pippin.

Fruit, medium or large, round, yellow, with brown specks; flesh, pale yellow, sub-acid. Grown in Virginia; keeps well. (Thomas.)

Alexander.

Emperor Alexander.

Foreign. Fruit, large, conical, flattened at base, red streaked on greenish yellow; stem, small; cavity, deep; calyx, large; basin, deep; flesh, coarse crisp; showy; poor bearer. October.

Ashmore.

Red Ashmore, | Fall Wine, *erroneously.*

American. A desirable variety deserving attention. Fruit, above medium, regular, round, bright clear red; short slender stem; deep cavity; calyx, small, closed; deep, regular basin; core, large; capsules, hollow; seeds, plump; flesh, white crisp, tender, juicy, sub-acid, sprightly. October and November. The Black Vandervere, a third rate fruit, is sometimes grown as this variety.

Ashland.

American. Fruit, medium, roundish flattened, slightly conical, dull greenish yellow, striped and splashed with dull red mingled with bluish gray, and large russet dots; flesh, yellowish white, tender, sweet, dry; hardly "very good;" stem, short; cavity, narrow, deep; calyx, small; basin, shallow; core, small; seeds, ovate flattened. November to January.

Aunt's Apple.

Fruit, medium to large, ovate flattened, light yellow, streaked with red, radiating from stem, which is short, stout; cavity, open, broad, russeted; calyx, closed; basin, finely folded; flesh, yellow, breaking, sub-acid, musky perfume, juicy; "very good;" core, medium. November to January.

Aromatic Carolina.

From South Carolina. "Tree, spreading, pendent, short fruit wood, abrupt terminal buds; fruit, large, oblate, conical, pale red, slightly streaked; heavy bloom; wide basin; open calyx; flesh, tender, melting, aromatic. July. Abundant bearer." (Wm. Sumner, in Hort.)

Autumn Seek-no-further.

American. Fruit, medium, roundish, pale green, faintly striped with red in sun; stem, slender; cavity, narrow, deep; calyx, open, erect segments; basin, round, medium depth; core, medium; flesh, white, juicy, tender, sprightly, sub-acid; "very good." October,

Autumnal Swaar.

Autumnal Sweet Swaar, | Sweet Swaar,
Sweet Golden Pippin.

Tree, spreading; shoots, vigorous, diverging; fruit, large, round, flattened, slightly ribbed, rich golden yellow; stem, long; basin, open, shallow; calyx, half closed; basin, deep; flesh, tender, yellowish, spicy, sweet, not juicy; "very good." October.

Autumn Pearmain.

English Summer Pearmain, | Royal Pearmain,
Summer Pearmain, | Parmain d'Ete,
Sigler's Red.

Foreign. Tree, slender, slow growth, irregular; fruit, medium, oblong conical, brownish yellow and green, red blended with yellow in sun, small brown specks; stalk, short; calyx, in a broad shallow basin, slightly plaited; flesh, pale yellow, crisp; nearly "best." September.

Aunt Hannah.

From Massachusetts. Fruit, medium, roundish, light yellow; flesh, tender, crisp, sub-acid; "very good." Winter.

Bailey Spice.

American. From Plattsburg, N. Y. Growth, moderate; shoots, reddish brown; fruit, medium, round ovate, tapering to eye, light yellow, faint blush in sun; stem, long, slender; cavity, deep; calyx, closed; basin, narrow; flesh, yellowish, greenish tint, sprightly, spicy; core, large, open; seeds, light brown. October. "Very good."

Bailey Sweet.

Patterson Sweet, | Edgerly Sweet.

From Perry, N. Y. Fruit, medium to large, round, ovate flattened, sometimes ribbed, clear yellowish red, with an occasional russet patch; stem, slender; cavity, narrow, deep; calyx, closed; basin, medium, abrupt, often plaited; flesh, yellow, rather dry, sweet; "very good;" core, medium; seeds, ovate pyriform. November to December.

Belzer.

American. Ohio. Fruit, medium, red striped on greenish yellow; flesh, white, fine grained, juicy, sub-acid. August. (T. S. Humrickhouse, in Hov. Mag.)

Benoni.

From Massachusetts. Growth, vigorous, erect, good bearer; fruit medium, roundish, narrowing towards the eye, deep yellow striped with crimson, dotted with white specks; stem, short, slender; cavity, narrow; calyx, large, open; basin, furrowed; flesh, yellow crisp, tender, juicy, vinous; "very good;" core, close; seeds, pale brown. August and September.

Bevan.

Bevan Favorite, | Striped June.

From New Jersey. Valuable as a market fruit, to transport long distances; we have thought the Red June, which comes to us at Cleveland from Kentucky, might be this apple, but have had no opportunity of comparing them in season. Fruit, below medium, roundish flattened, slightly conical, distinct broad red stripes on yellow; stem, varying from short to long; cavity, shallow; calyx, large; basin, plaited; flesh, firm, tough, sub-acid; seeds, plump, ovate pyriform. August. We are also of opinion this may be the Carolina June, of the West.

Bentley's Sweet.

From Virginia. Tree, moderately vigorous, hardy, good bearer, great keeper; valuable south, in rich soils. Fruit, above medium, oblong, irregular, flattened at ends; red and yellow striped, or blotched; stem, long, curved; calyx, large; basin, open, deep, furrowed; core, compact; seeds, large, ovate, pointed; flesh yellowish, firm, tender, juicy; "very good." January to Sept.

Better than Good.

Juicy Bite.

From Pennsylvania. May prove identical with some already described. Tree, slender, irregular; fruit, medium, roundish, tapering to the eye; yellowish white; flesh tender, juicy, sub-acid; "very good." Early Winter

Bean Sweet.

"This fruit I procured of the late Judge Buel. Medium size, ovate, oblong. Color, nearly white, producing a splendid appearance when ripe on the tree; crisp and juicy; ripe in Oct.; will keep till Feby. or March; a good baking apple." (B. V. French, Esq., Ms.)

Blue Pearmain.

Tree, hardy, shoots stout, dark color; buds, large, unsuited to exposed situations, the fruit being large and heavy is easily blown off. Fruit, very

large, roundish, slightly conical, striped and blotched with purplish red over a dull ground; white bloom; stem, short; calyx, small; basin, deep; core, medium; flesh, yellowish, mild sub-acid; "very good." Early Winter.

Black Apple.

Black American, | Jersey Black,
Dodge's Black.

American. Tree, slender, moderate growth, drooping, when old; a good bearer; negative quality, often esteemed. Fruit, medium, round slightly flattened, dark red, almost black, whitish bloom, and many whitish specks; stem, medium; cavity, deep; calyx rather small; basin, shallow; core large; capsules, long, ovate, hollow; seeds, ovate pointed; flesh, yellowish white tinged with red, crisp, juicy. Nov. to Feby.

There is much confusion at the West with this variety, and several fruits are grown under the same name. One under name of Black, or "Canada Black," is oblong, with greenish flesh, inferior; tree, a fine grower.

Another is of medium size; fruit depressed at ends; skin rough; flesh, aromatic; ripening in September; tree upright grower, with rough uneven bark.

Black Coal.

Welcome.

This is also another of the Black apples grown West. Fruit, above medium, round, regular smooth, glossy, rich dark red striped, and mostly overspreading a lighter red; numerous specks; stem, short; cavity, deep, slightly russeted; calyx, closed, woolly or downy; basin, open; core, large, hollow; seeds, loose; flesh, white, slightly tinged with red, crisp, juicy, tender, rather acid. Nov. to Feby.

Bledsoe.

"From Kentucky. Resembles White Pippin, (Canada Pippin.) Fruit, large, conical, flattened at base, greenish yellow, light bronze at base, brownish specks; skin, smooth; stem, short; cavity, deep; calyx, small, closed; basin, shallow; core, open; seeds, large, light brown; flesh, white, tender, juicy; "very good." March and April. Claimed as a seedling; new." (A. H. Ernst, Ms.)

Blood.

From central Ohio. Fruit, medium, roundish, occasionally angular; dull red, marbled and striped with shades of purplish red, occasional rough gray dots; stem, varying; cavity, funnel shaped; calyx, half open; broad segments; basin furrowed; core, small, compact; seeds, oblong ovate, dark red; flesh, yellowish, tinged with red near the surface, breaking mild almost sweet; "very good." Dec. to March.

Boalsburg.

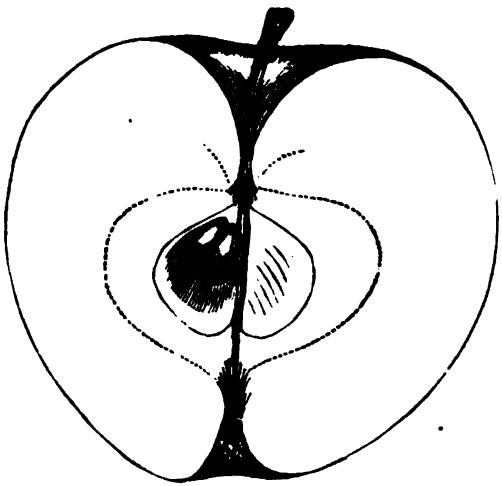
A seedling of Centre County, Pennsylvania. Large, oblong, inclining to

conical, delicately mottled and striped with red on a yellow ground; stem, short, thick; deep, acuminate, russeted cavity; basin, deep, moderately wide; flesh, yellowish, juicy, sprightly, and refreshing; "very good." (W. D. B.).

Bohanon.

A variety probably originally of Virginia, lately brought to notice as grown by Lewis Sanders, Esq., of Ky. It much resembles Maiden's Blush. Fruit, large, roundish flattened, narrowing to the eye, with inclination to a ribbed surface; light pale yellow, crimson blush on sunny side, russet about stem; stem, slender; cavity, narrow; calyx, partly closed; basin, deep expanded; core, open; seeds, numerous, light brown; flesh, yellowish white, tender, slightly aromatic, sub-acid. Sept.

Bourassa.



Foreign. Succeeds finely in Canada and northern sections,—Vermont, North Michigan, on poor soil, etc. Fruit, medium, ovate conical, slightly ribbed, occasionally irregular; color, rich, orange russet on yellow, reddish brown in sun; stem, long, slender; cavity, small, irregular; calyx, with long segments; basin, narrow; core, rather large; seeds, few; flesh, white, fine grained, sub-acid; "best." October to January.

Brabant Bellflower.

Brabant Belle-fleur, | Iron Apple.

Foreign. Tree, strong, irregular growth, making, however, a good head. Valuable for cooking. Fruit, above medium, roundish oblong, flattened at ends; pale yellow, mostly coverered with red striped and

splashed; calyx, large; basin, wide; flesh, firm, crisp, sharp sub-acid. Nov. to Jany.

Brooke's Pippin.

A native of Virginia. Large, roundish, inclining to conical, obscurely ribbed; greenish yellow, with a faint blush; stem, short, rather stout, deep, irregular, russeted cavity; basin, small, shallow, waved, sometimes furrowed; seed, long, slender acuminate; flesh, crisp, juicy, of fine texture, with a pleasant aroma; best;" winter; bearing abundantly every year in localities where the Newtown Pippin, to which it bears some resemblance, does not succeed.

Buck's County.

Buck's County Pippin.

A Pennslyvania Seedling. Large, roundish oblate, inclining to conical; greenish yellow, with sometimes a faint brown cheek; stem, short, not stout, inserted in a deep, open cavity; basin, wide, deep, slightly plaited; seed, small, short; flesh, tender; texture fine; flavor excellent; ".very good. (W. D. B.)

Butter Apple.

American; probably from Pennsylvania. Fruit, below medium, regular roundish, red marbling and overspreading yellow, few yellow russet dots, russet near and in cavity of stem; stem, long, slender; cavity, narrow, deep; calyx, half closed; basin, abrupt ribbed; core, medium; seeds, roundish ovate; flesh, yellowish white, tender, sweet; "very good." Nov. to Feby.

Buffington's Early.

A moderate bearer; origin unknown. Fruit, below medium, flattened, little ribbed, yellowish white, with faint blush; cavity, deep; basin, shallow furrowed; flesh, tender, delicate sub-acid; "best." Last of July.

Burr's Winter Sweet.

Native of Hingham, Mass. Tree, good grower, spreading. Early and abundant bearer. Fruit, large, roundish oblate, flattened at base, full at crown; smooth, greenish yellow, striped and splashed with vermilion, russet at stem; small gray specks; stem, short, slender; cavity, broad, open; eye, medium, closed; segments, short; basin, open ribbed; core, small; seeds, medium; flesh yellowish, tender, sweet, slight aromatic perfume. Dec. to March. (Hov. Mag.)

Bush.

Native of Boalsburg, Pa. Size, medium, oblate, conical; greenish yellow, russet dots near the crown; calyx, small; basin, deep plaited; flesh, "very good." (W. D. B.)

Carnahan.

Cannahan's Favorite.

Native of Southern Ohio. Tree, vigorous, spreading. Fruit, large, roundish, tapering to the eye, yellow, with stripes of red, greenish russet dots; stem, medium; cavity, deep, open; calyx, large, long segments; basin, ribbed; core, compact; seeds, brown; flesh, yellowish white, juicy; "very good." Dec. to Feby.

Cannon Pearmain.

American. Tree, good grower, branches diverging. Fruit, small, roundish, often angular, yellow with dull red, and large yellow specks; stem, long curved; cavity, shallow, russety; calyx, small, closed; basin, furrowed; flesh, yellow, crisp, sprightly; "very good." Dec. to March

Cann.

American. Fruit, medium, nearly conical, dull green, little red in sun, and near the stem; flesh, white, sweet; "very good." Oct. to Dec. Tree, thrifty, spreading.

Campfield.

Newark Sweeting.

American. Tree, vigorous, nearly upright, spreading. Fruit, medium, roundish flattened; greenish yellow, with dull red in sun; flesh, white, dry sweet; valued for stock and cider.

Carolina Winter Queen.

American. We have seen but little of this apple, but are impressed with the idea that it is destined to be a valuable and popular variety South, far superior to Northern Spy. Fruit, above medium, roundish conical; greenish yellow streaked and stained with red from the stem, a little russet at stem, and few small faint dots; calyx, open, segments, reflexed; basin, round, medium; stem, slender; cavity, deep; core, medium; seeds, abundant; flesh, yellowish, sprightly, crisp, juicy; "best." Nov., Jany.

Cayuga Red Streak.

Twenty Ounce, Eighteen Ounce, Twenty Ounce Pippin, *erroneously.* | Twenty Ounce Apple, Gov. Seward,

From Western New York. We adopt the name "Cayuga Red Streak," to prevent continued confusion with "Twenty ounce Pippin." Fruit, large, roundish conical, dull yellowish green striped and marbled with yellowish red; stem, short; calyx, closed; core, large; flesh, yellowish white, coarse, crisp; sub-acid. Nov., Dec. Esteemed for cooking.

Cat Face.

From Kentucky. Fruit, large, conical, flattened at ends; greenish yel-

low, streaked with light and dark red; stem, long, slender; cavity, deep, wide; calyx, prominent; basin, deep; core, small; seeds, light brown; flesh, white, tender, brisk, sub-acid. April and May. (A. H. Ernst, Ms.)

Clyde Beauty.

Mackie's Clyde Beauty.

From Clyde, N. Y. Productive. Fruit, large, roundish conical, slightly ribbed; pale, greenish yellow, striped and mottled with light red, deep crimson in the sun; stem, short, slender; cavity, deep; calyx, closed; basin, furrowed; flesh, white, fine grained, juicy, sub-acid; "best." October to December. Deserves more attention.

Cole.

Scarlet Perfume.

Foreign. Tree, slender growth, irregular, diverging or spreading, hardy, an early bearer of a pleasant sprightly fruit. Fruit, medium, roundish, little conical, bright red; stem, long, slender; calyx, medium, partly closed; flesh, white, juicy; "very good." August.

Cooper.

Beauty Red, | Lady Washington,
Seek-no-further, *of some erroneously.*

An Eastern variety, recovered at West, where it was brought in 1796; its identity with any variety now known East, is not established; hence we must continue under its present name. Growth, upright, stout; branches at right angles; wood, reddish, "subject to canker;" a good bearer, maturing its fruit nearly all at the same time. Succeeds best on rich limestone clay.

Fruit, large, often very large; roundish flattened, greenish yellow with stripes and blotches of pale red; calyx, closed; basin, deep; stem, slender, short; cavity, deep; flesh, yellowish, not fine grained, crisp, juicy; "very good." September, but often keeps to November.

Cooper's Early White.

Grown in Illinois and Wisconsin, where it is regarded as productive and profitable. Fruit, medium; roundish, little flattened; pale yellow, with faint blush, greenish tinge at stem; stem, short; cavity, narrow, deep; calyx, closed; basin, deep, abrupt, slightly furrowed; flesh, white, crisp, sprightly. September and October.

Cocklin's Favorite.

Small, roundish, truncated apple, native of Allen Township, Cumberland Co.; quality, "very good." (W. D. B.)

Chief Good.

Summum Bonum.

From Kentucky, near Louisville. Fruit, medium to large, roundish,

flattened at base, light yellow, streaked and mottled with red, few splashes of green; stem, short, slender; cavity, open; calyx, small, partly closed; basin, shallow; flesh, white, tender, juicy, sub-acid, aromatic; core, open; seeds, large, light brown. September and October. (A. H. Ernst. Ms.)

Court-pendu-Plat.

Court-pendu,	Capendu
Garnon's Apple,	Cour pendu, Extra,
Cour pendu, Rond Gros,	" " Rouge Musqué,
" " Musqué,	Pomme de Berlin,
Coriandra Rose,	Russian,
Wollaton Pippin,	Princisse Noble Zoete.

Foreign. Tree, slender; early and prolific bearer. Fruit, medium, regular, flat; pale greenish yellow, crimson in sun; stem, short; cavity, deep; calyx, large; basin, wide, shallow; flesh, yellow, crisp, sprightly little acid; "Very good." November to February.

Court of Wick.

Barlow,	Court of Wick Pippin,
Court de Wick,	Rival Golden Pippin,
Fry's Pippin,	Golden Drop,
Wood's Huntingdon,	Transparent Pippin,
Philip's Reinette,	Knightwick Pippin
Week's Pippin,	Yellow.

Foreign. For those who like a firm, spicy, sprightly fruit for dessert, this may be esteemed. Tree, very hardy—suited to the North. Fruit, small, regular, roundish ovate, flattened; greenish yellow in shade, little red and dotted with russet specks in sun; stem, long, slender; calyx, with long wide spread segments; basin, shallow; core, large; seeds, ovate; flesh yellow, sharp, sub-acid, crisp, juicy. October to February.

Cumberland.

Cumberland Seedling.

From Cumberland County, Pa. Tree, fine grower. Fruit, esteemed valuable for market; large, roundish, flattened; flesh, white, sub-acid; "good;" new.

Cumberland Spice.

The Blenheim Pippin has been received at the West as this variety. In absence of fruit to examine, we copy Thomas's description:

"Rather large, varying from roundish-conical to long-conical, the tapering sides being nearly straight and not rounded; color, waxen yellow, with a slight vermilion tinge near the base, and with black specks on the surface; stalk, half to three-fourths of an inch long; cavity, wide, slightly russeted; calyx, open; basin, even; flesh, yellowish-white, breaking, rather light; core, hollow; flavor, mild sub-acid, with a peculiar and agreeable spiciness; of good second-rate quality."

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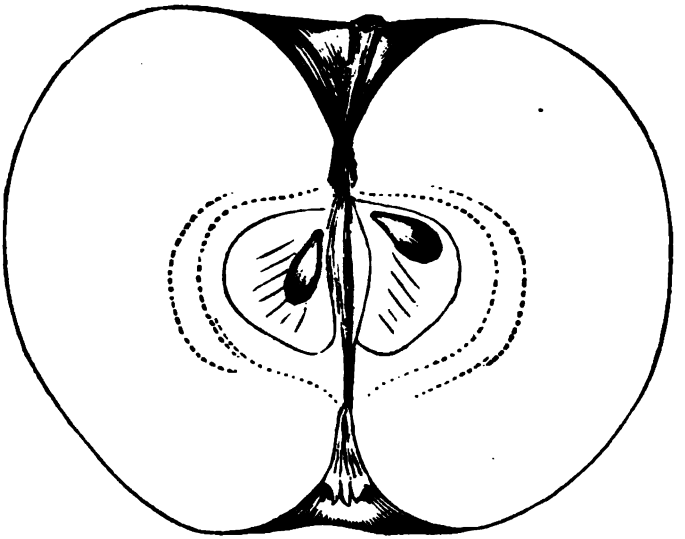


"From Harrison County, Ohio. Tree, strong grower; requires little pruning." Fruit, large, roundish, yellowish white; flesh, tender, juicy; "very good." October to January. (Dr. J. A. Warder's Notes.) New; highly esteemed where known.

CAT PIPPIN.

West's Spitzenberg, Haymaker, | Housemaker Pippin, Hommacher Apfel.

Western Pennsylvania. Tree, vigorous, productive. Fruit, medium to large, greenish; flesh, greenish, juicy, sub-acid. December to April. New.

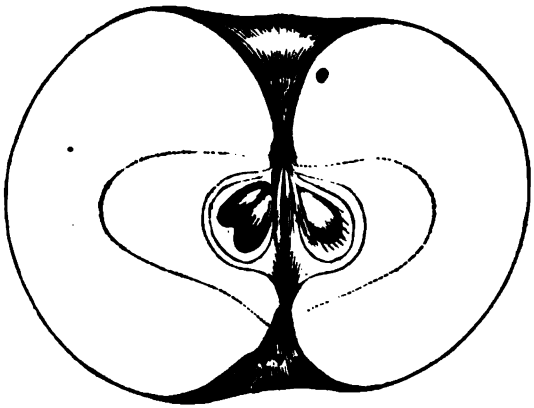
DARLINGTON.

Darlington Russet.

Native of northern Ohio. Fruit, medium, roundish, clear smooth russet; stem, medium; cavity, deep; calyx, half closed; basin, deep; flesh, white; hardly "very good." January to June.

DELIGHT.

From R. Buchanan, Esq., Southern Ohio. Fruit, medium, roundish flattened, slightly angular, yellow russet at stem, irregular russet spots, vermilion red cheek in sun; stem, very short; cavity, deep; calyx, large, short segments; basin, round, slightly furrowed; core, compact; seeds,



ovate angular; flesh, yellowish, firm, mild sub-acid, almost sweet; "very good." New. February to May.

Detroit.

Red Detroit, | Black Detroit,
Crimson Pippin.

Foreign. Introduced to Detroit, Michigan, by early French settlers. Fruit, medium to large, roundish flattened, dark blackish crimson, dotted and marbled with fawn specks in sun; cavity, deep; calyx, closed; basin, plaited; core, large, hollow; flesh, white, often stained with red to the core, crisp, juicy, sub-acid. October to February. This is sometimes grown as the Black Apple.

Dillingham.

From D. C. Richmond, Esq., Sandusky, Ohio. Native. Fruit, medium, round, regular, whitish yellow, dots of red in sun; cavity, deep russeted; calyx, closed; basin, medium; core, small; seeds, plump; flesh, white, fine grained, juicy, sweet; "very good;" great bearer. October and November.

Doctor.

Red Doctor, | De Witt.

Native of Pennsylvania. Much grown in southern Ohio and Indiana, producing abundantly of second-rate fruit. Fruit, medium to large, flat; yellow striped and washed with several shades of red and occasional spots of russet; calyx, closed; basin, open; cavity, deep; core, small; seeds, oblong, pyriform; flesh, tender, juicy. October to January.

Domine.

Origin uncertain Tree strong vigorous grower; shoots, long, diverg-

ing; early good bearer; profitable orchard sort West; succeeding finely in most soils. Fruit, medium to large, flat, greenish yellow, with stripes and splashes of bright red and large russet specks; stem, long, slender, inclining to one side; cavity, wide; calyx, small; basin, broad; core, medium; seeds, abundant, purplish brown; flesh, white, tender, juicy; "very good." November to April.

Dutchess.

Dutchess of Oldenburgh.

Foreign. Tree, vigorous, with dark, upright shoots, moderate bearer; valued for cooking. Fruit, medium to large, roundish flattened, light red striped and splashed on yellow; stem, short; cavity, acuminate; basin, deep; flesh, yellowish white, sharp sub-acid. August and September.

Emperor.

Dickson's Emperor.

From Scotland. New. Fruit, large, irregular, slightly ribbed; yellow, with dashes of carmine red, and minute specks of straw color; dull red cheek in sun; stem, short; calyx, large; basin, deep, irregular; core, small; flesh, yellowish white, juicy; "very good." November to January.

Early Pennock.

Shakers' Yellow, Indian Queen? | August Apple, New Jersey Red Streak?
Warren Pennock.

This is probably an old Eastern variety so changed by our Western soils as not to be recognized. It was distributed West from Harrison or Belmont Counties, Ohio. Trees, thrifty, hardy, early prolific bearers of fruit, rather below second rate quality; fruit, large, roundish, tapering to the eye; greenish yellow, blotched and streaked with lively red; stem, long; cavity, deep, irregular; flesh, yellowish white, juicy, sub-acid. August. Resembles, but is distinct from, Summer Queen.

English Golden Russet.

Golden Russet, of New York.

Foreign. Growth, irregular; fruit, medium, roundish, russet on yellow; stem, slender; flesh, fine grained, crisp; nearly "best." December to March.

English Sweeting.

Ramsdell's Sweeting, Ramdell's Sweet, | Ramsdell's Red Pumpkin Sweet, Red Pumpkin Sweet,
Avery Sweeting.

Foreign. Tree, vigorous, upright, early prolific bearer; fruit, medium to large, oblong, tapering to the eye, green and rough in shade, dark red dotted with fawn specks, and with a blue bloom in sun; stem, short; cavity, narrow, angular, often a fleshy knob; calyx, with short stiff segments; basin, round, regular; core, long ovate; seeds, imperfect; flesh, yellowish white, sweet; "very good.' October to February.

Esten.

From Rhode Island. Tree, vigorous, productive; fruit, large, oblong ovate, slightly ribbed; yellow, faint blush in sun, large green dots; stem slender; cavity, deep; basin, shallow; flesh, white, sub-acid. October.

Eustis.

Ben.

Native Mass. Fruit, medium to large, roundish, slightly flattened; red and yellow striped or splashed; stem, slender, inclined one side; cavity, deep, open; calyx, closed: basin, open; core, small; seeds, ovate angular; flesh, yellowish, crisp, tender, aromatic, sub-acid. December to January.

Fall Jennetting.

Fall Gennetting.

Probably American. An old variety known to us in Connecticut when a boy, although Mr. Hovey says, in 1847—"New and very desirable." Fruit, large, roundish, flattened, ribbed at base, narrowing to the eye, pale greenish yellow, blush in sun, russety specks; stem, short; cavity, deep; calyx, closed; basin, round; core, small; seeds, angular; flesh, yellowish white, tender, juicy; "very good." October and November. (Hov. Mag.) There is another Gennetting grown in Ohio, maturing from July to September, which is sour and unworthy.

Foundling.

Fuatling.

Native of Mass. "Fruit, large, roundish flattened, narrowing to the eye, yellowish green, with broken stripes pale red, greenish specks; stem, short, slender; cavity, deep; calyx, closed; basin, furrowed; core, medium; seeds, small; flesh, yellowish, crisp, tender, sprightly, sub-acid. August and September." (Hov. Mag.)

Fall Queen.

Horse Apple, Oldfield, | Red Gloria Mundi? Fall Beauty.

Origin unknown. Valued highly South and West for cooking. Fruit, medium to large, roundish conical, little irregular, greenish yellow to orange, blush in sun, russet lines about stem; stem, short; cavity, shallow; basin, narrow; core, large, hollow; flesh, yellow, coarse, acid. Last July.

Fall Harvey.

Native of Mass. Not productive. Fruit, large, roundish flattened, greenish yellow, with scattered brown dots; stem, slender; cavity, deep; flesh, white, mild sub-acid, juicy; "very good." October and November.

Favorite.

From Kentucky. Fruit, small, roundish, tapering to the eye, pale yel-

low, striped and splashed with red, and small rough dots; stem, short; cavity, deep; calyx, small; basin, medium, regular; core, medium; seeds, long ovate; flesh, yellow, juicy, mild sub-acid; not quite "very good." November to January.

Father Abraham.

From Virginia; considerably grown in Kentucky. We copy Coxe's description: "Small, flat, red, little yellow, spots and blotches of darker red; texture, thin, tender; flesh, white, tinged with red next the sun, juicy, agreeable. Early winter. Keeps till April."

Ferdinand.

Native South Carolina. Tree, moderately vigorous, upright; fruit, large, oblate, irregular, pale greenish yellow; stem, thick; calyx, open; basin, shallow; flesh, yellowish, tender. November to March. New. (Wm. Sumner in Hort.)

Fleiner.

Foreign. Tree, great bearer, growth upright; fruit, medium, oblong, lemon yellow, red cheek; flesh, white, tender, sub-acid; "good." September and October. Productiveness its chief merit.

Franklin Golden Pippin.

Tree, upright, vigorous, early annual bearer; fruit, medium, roundish ovate, conical, pale light greenish yellow, interlined with fine whitish net work, few russet dots; stem, slender; cavity, deep; calyx, small, closed; basin, narrow, slightly plaited; flesh, crisp, juicy; "very good." October.

French's Sweet.

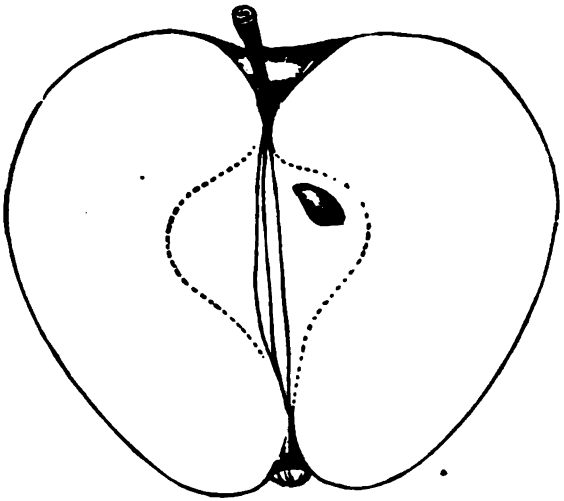
The seedling trees are still standing in Braintree, Mass. Large, round ovate, green, inclining to a yellow when fully ripe, great bearer, highly perfumed; flesh, firm. Ripe October and November, and will keep till January or February. Richest baking I know. (B. V. French, Ms.)

Fronclin.

"Native of Lancaster Co., Pa. Tree, rapid grower, great bearer; fruit, medium, regular, round; bright red; flesh, yellowish, acid, vinous. New. (Pom. Trans.)

Flushing Spitzenberg.

American. Tree, vigorous, strong brown shoots; fruit, medium, roundish, slightly conical, greenish yellow, mostly covered with warm yellowish red, russet dots, with suffused fawn shade surrounding; stem, slender; cavity, narrow; calyx, small; basin, shallow; core, rather large; flesh, white, tinged



yellow, juicy, crisp, mild, nearly sweet; "very good." November to February.

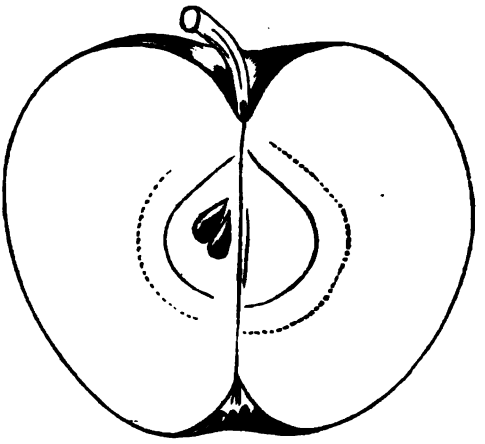
Fulton.

Native of Canton Co., Ill. Original tree, when 19 years old, gave 36 1-2 inches circumference, 3 feet from ground, 25 feet high, and 28 feet across top, and had produced large crops ten years in succession. Fruit, medium, roundish flattened, pale clear yellow, bright red cheek, little russet in stem cavity, small dots; stem, short; cavity, deep; calyx, small, short segments; basin, rather deep; core, small; seeds, ovate, pointed; flesh, white, tender, juicy, mild sub-acid; "very good." November and December.

Gabriel.

Ladies Blush.

The origin of this variety is uncertain. It will most likely yet prove identical with some variety heretofore described. Our engraving is under medium size of the apple. Trees, moderate growth, good bearers; fruit, medium or below, roundish conical, yellowish, striped, and splashed with pale red; stem, slender; cavity, medium; calyx, small; basin, shallow



core, medium; seeds, long ovate, pointed; flesh, yellowish, juicy, sub-acid; "best." October and November.

Garretson's Early.

John Garretson's Early.

Native probably of New Jersey. Tree, vigorous growth, early, abundant bearer; fruit, medium, roundish, flattened; pale green, becoming yellowish, dotted with whitish specks; stem, short; cavity, shallow; calyx, closed; basin, ribbed; core, large; seeds, plump; flesh, white, crisp, tender, sub-acid; "very good." August.

George.

From Muskingum Co., Ohio. Tree, spreading, free bearer; fruit, medium, roundish flattened, pale yellow, with russety blotches and specks, oft quite russety; calyx, large, open; basin, shallow; flesh, whitish, firm, juicy, mild acid. July.

Gilpin.

Carthouse, | Romanite of the West.

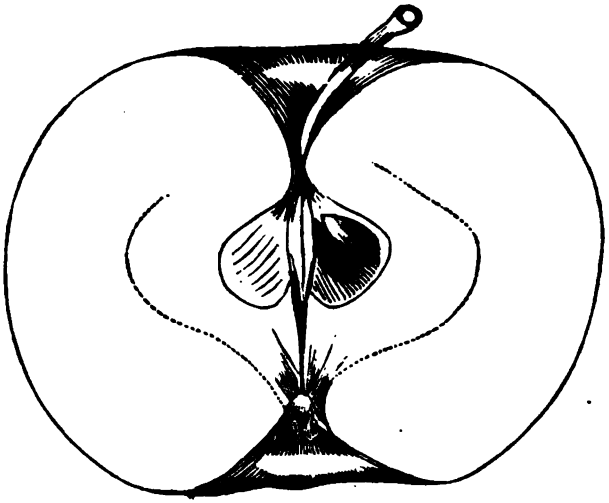
From Virginia. Its keeping and bearing qualities will always render it more or less popular. Fruit, below medium, roundish, flattened at apex, deep red and yellow; stem, varying; cavity deep; calyx, closed; basin, sometimes furrowed; core, medium; seeds, ovate; flesh, yellow, firm, juicy, will keep a year.

Giles.

From Wallingford, Conn. Fruit, medium, conical, dark red; flesh, tender, juicy; "very good." October and November.

Gray Vandervere.

Windower, Great Vandervere, White Vandevrere, | Indian Apple, Betsey's Fancy, Vandervere Pippin, *of some.*



A great bearer, good keeper, by some preferred to the Vandervere. Dr. Warder says, this is the variety common in Philadelphia market, and esteemed highly for cooking. Fruit, medium or slightly above, round flattened; skin, rough, uneven, mostly a dull red, with gray bloom, small specks of russet, a little bronze at the stem; stem, long; cavity, open; calyx, with short segments; basin, broad, open; core, medium; flesh, yellowish, breaking, moderately juicy. December to March.

Granny Earle.

Fruit, small, roundish oval, green, striped and splashed with red; flesh, white, crisp, tender. November to January. (Hov. Mag.)

Granniwinkle.

Tree, slow grower, compact head, first described by Coxe; esteemed only for cider. Fruit, medium, roundish, oblong, dark red; flesh, yellowish, sweet. October and November.

Gully.

From Lancaster co., Pa. Fruit, small to medium, white with blush cheek; flesh, white, juicy. New. (Pom. Trans.)

Green Seek-no-further.

Seek-no-further of Coxe, | Bracy's Seek-no-further.

Growth, vigorous, upright; fruit, large, roundish conical, greenish yellow, with dark specks; stem, short; calyx, large; basin, deep, slightly ribbed; flesh, white, little coarse, mild sub-acid. November to January.

Haglor.

Summer Hagloe.

Tree, medium bearer, dark colored strong shoots, valued for cooking, often fine for dessert; fruit, medium, roundish flattened, bright red on yellow; flesh, tender. July. Distinct from Hagloe Crab. a small ovate cider fruit.

Harrison.

Generally grown for cider, but, in absence of better fruit, and kept until March, it becomes "very good" for dessert. Tree, thrifty, hardy, very productive; fruit, medium or small, roundish ovate, yellow, with black specks, light suffused shade around; stem, one inch; cavity, wide; calyx, closed; basin, shallow furrowed; flesh, yellow, firm, spicy, sub-acid; core, large; seeds, long ovate. November to March. It is from this variety, mixed with a small proportion of Campfield, that the celebrated Newark cider is made.

Hartford Sweeting.

Spencer Sweeting, | Champ Sweeting.

Native of Hartford, Conn. Growth, slow, hardy, productive; fruit, large, roundish flattened; red striped on greenish yellow; stem, slender; cavity, shallow; calyx, large; basin, shallow; flesh, whitish, juicy, tender; "very good." December to March.

Haskell Sweet.

Sassafras Sweet.

Tree, vigorous, moderately prolific, deserves more general culture; fruit, large, nearly flat, greenish, with dull brown cheek in sun; stem and cavity, medium; flesh, tinged with orange yellow, tender, sweet; almost "best." October.

Hawley.

Douse, | Dow's.

Native of Columbia Co., N. Y. Much resembles Fall Pippin, but larger and ripens earlier, and is invariably affected with dry rot in all soils, otherwise it would take first class. Fruit, large, roundish, flattened, conical, yellowish green to yellow, with few brown dots; stem, slender; cavity, wide; calyx, small, partly closed; basin, medium, slightly plaited; flesh, yellowish white, tender, juicy, sub-acid. October, sometimes in September.

Hector

From Chester county, Pa. Large, oblong, conical, striped and mottled with red on a yellow ground; stem, slender; deep, open russeted cavity; basin, narrow, deep, furrowed; flesh, crisp; texture, fine; "very good." (W. D. B.)

Helen's Favorite.

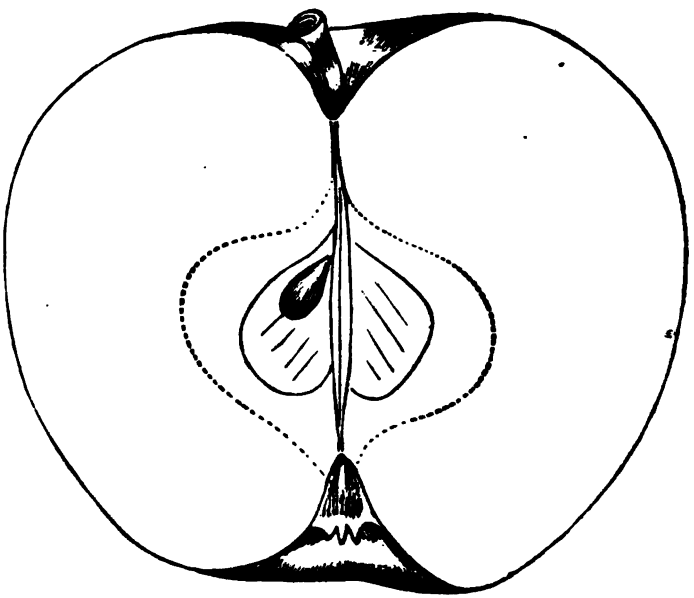
From Troy, Ohio. Fruit, medium, roundish, dark red shades, light spots; stem, short, slender; cavity, deep; calyx, small; core, compact; seeds, small; flesh, white, streaked with red, tender, juicy; "very good." January and February. (A. H. Ernst, Ms.)

Herman.

From Cumberland co., Pa. Tree, productive; fruit, medium, oblong, red striped on greenish yellow; flesh, greenish, tender, juicy; "very good." December to April. (Pom. Trans.)

Holland Pippin.

Reinette d' Holland, Summer Pippin, | Pie Apple, French Pippin, of some.



Tree resembles Fall Pippin, with which it is often confounded, but from which it is distinct. It is esteemed for cooking, for which it is fitted

in August, but we think surpassed by Gravenstein. We refer for description to Fall Pippin, with this difference, more regular round, stem shorter, cavity not as deep, more broad and open, calyx smaller, and basin not as wide.

Housum's Red.

From Berks county, Pa. Large, oblong, compressed at the sides, skin red in stripes, yellow at base; stem, short, thick; cavity, narrow, not deep, slightly russeted; basin, moderately deep, plaited; flesh, fine texture, tender, with delightful aroma; "very good" at least. October to February. (W. D. B.)

High Top Sweet.

Summer Sweet, of Ohio, | Sweet June, of Illinois.

From Plymouth, Mass. Tree, upright, productive; fruit, medium, roundish, greenish yellow, with greenish white dots; stem, slender; calyx, closed; flesh, yellowish white, tender, juicy, sweet; "very good." Last of July.

Hunter.

From Delaware Co., Pa. Fruit, medium, roundish, conical, striped and splashed bright red on yellow; stem, slender; cavity, narrow; calyx, small; basin, deep; flesh, white tinged with pink, tender, crisp, juicy. October.

Jabez Sweet.

From Middletown, Conn. Fruit, medium, nearly round, pale green, dull red in sun, sweet. October to April. (Hov. Mag.)

Jefferson.

Tree, good habit, spreading, much grown and esteemed in some parts of Kentucky, from whence we once received specimens in April (after laying in a warehouse during winter), in fine condition. Fruit, medium to large, roundish conical, dull red on yellow, splashed; stem, slender; cavity, moderate; calyx, small, partially closed; basin, open; core, compact; seeds, light brown; flesh, yellowish white, tender, juicy, sub-acid; almost "best." October to March.

Jefferis.

From Chester co., Pa. Tree, moderate grower, upright habit, constant, abundant bearer; fruit, roundish flattened, pale yellow, striped and stained with red, becoming dark in sun, dotted with white spots and russet at stem; stem, half inch, slender; cavity, narrow, deep; calyx, nearly closed, woolly; basin, deep, regular; flesh, white, crisp, tender, juicy; "best." September and October. New.

Jersey Pippin.

Foreign. Fruit, medium, round, oblong, conical, flattened, pale yellow-

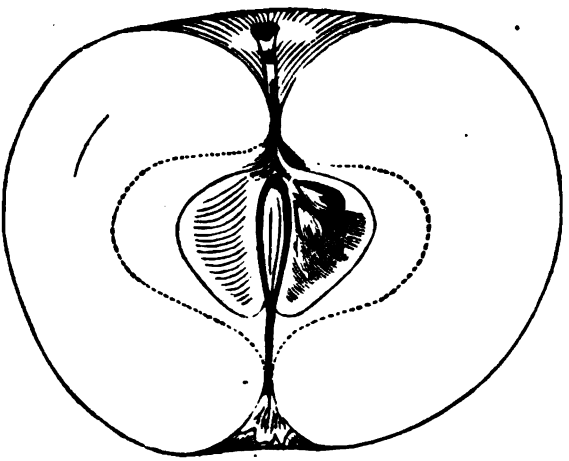
ish green, faint stripes red; stem, short, stout; cavity, deep, open; calyx, rather large; basin, shallow; core, small; seeds, imperfect; flesh, greenish yellow, juicy, vinous, sub-acid; "very good." November to February. New.

Jenkins.

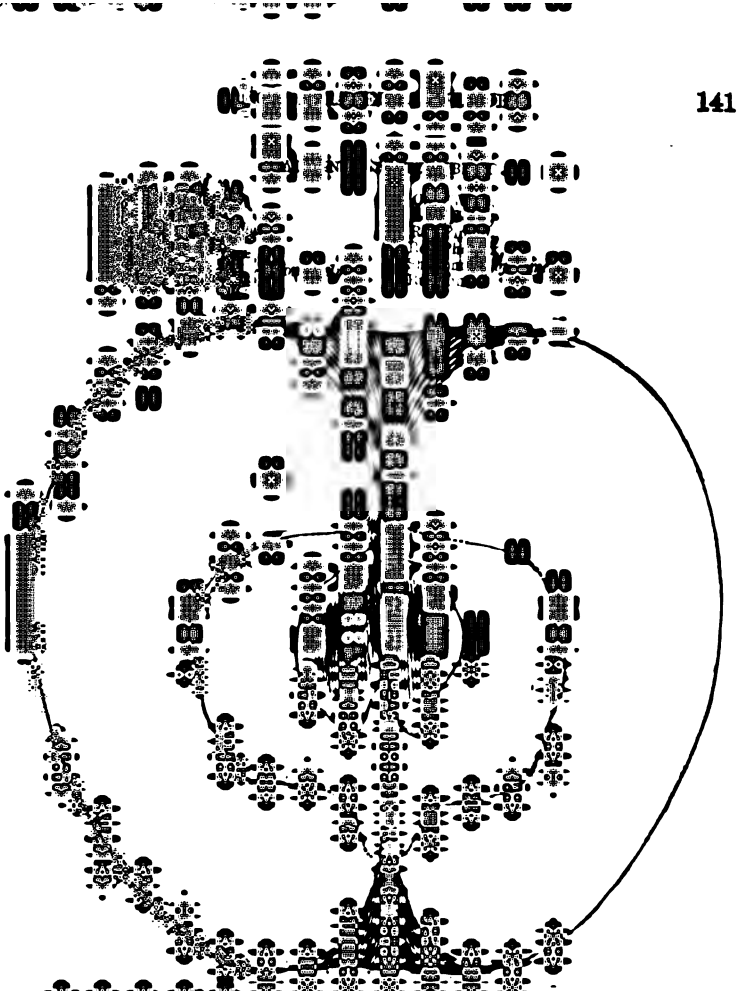
Native of Montgomery Co., Pennsylvania. Fruit, small, roundish ovate; red, interspersed with numerous large white dots, on a yellowish ground; stem, slender; cavity, deep, rather wide, sometimes russeted; calyx, closed; basin, deep, open, furrowed; core, above medium; seed, grayish brown, acute-ovate; flesh, white, tender, fine texture, juicy; flavor, agreeably saccharine, exceedingly pleasant and aromatic; "very good," if not "best." The Jenkins is one of those delicious little apples peculiarly fitted for the table at evening entertainments. (W. D. B.)

Jewett's Red.

Jewett's Fine Red, | Nodhead.



Tree, slow, rather slender diverging growth; fruit unfair while young; best adapted to strong clay soils North, where it is hardy, and said to succeed well. Fruit, medium to large, roundish flattened, tapering to the eye, sometimes angular; greenish yellow, mostly overspread or striped with red, numerous white dots; stem, varying; cavity, narrow; calyx, small, partially closed; basin, shallow, wrinkled; core, medium; seeds, ovate, rounded; flesh, yellowish white, fine grained, tender, mild aromatic sub-acid; "best." November to February.



all of its good
ted to detect it,
late Ohio Pom.
ut, and the name.
uit, large, oblong
red; stem, about
tyx, small; basin,
flesh, yellowish,
Often grown in

oking, and suited

to Western soils; one of best. Fruit, medium or above, roundish ovate conical; greenish yellow, with brownish cheek in sun, and light dots, one or two raised lines from stem to apex; stem, slender; cavity, shallow; calyx, closed; basin, furrowed imperceptible; core, medium; seeds, ovate; flesh, greenish or yellowish white, tender, acid. September and October.

Kingsley.

From Monroe Co., N. Y. Tree, erect, moderate grower, hardy, profuse early bearer; fruit, medium, roundish oval; yellowish, striped and splashed with pinkish red, white dots, russet near calyx; stem, slender; calyx, small, closed; basin, shallow; core, medium, open; seeds, small, dark brown; flesh, fine grained, juicy, sub-acid; "best." November to July. (H. Wendell in Pom. Trans.)

King Apple.

There are two distinct fruits under this name, one grown in Western N. Y., and one in Mason Co., Ky.

The first is as follows: Fruit, large, roundish oblong, somewhat ribbed, pale yellow ground, mostly covered with two shades of red, striped and splashed, brown dots, and russet patches on sunny side; stem, stout, thick; cavity, open, regular; calyx, with long pointed segments; basin, abrupt, slight furrows, and projecting ribs surrounding; flesh, yellowish, crisp, juicy, sub-acid. November and December.

The second is: Fruit, yellow, clouded, and mostly obscured with dull red, small specks, and large patches of mould or fungus peculiar to the Southern grown fruits; oblong, flattened at base; calyx, small; basin shallow; stem, short, slender; cavity, narrow; core, small; seeds, medium; flesh, white, tender, juicy, sub-acid. January to February.

Lancaster.

Lancaster Greening.

From Lancaster Co., Pa. Tree, hardy, vigorous, productive; fruit, medium, roundish conical, greenish yellow, with brown dots and blotches; stem, short; cavity, deep; calyx, small; flesh, greenish white, juicy, sub-acid; valued for keeping till April.

Lecker.

Laquier, | Lacker.

From Lancaster, Pa. Described by Thomas as Laquier. Medium, roundish oblate; skin, striped with crimson on a paler red, with numerous large dots; stem, short and slender, sometimes stout; cavity, russeted, narrow, rather deep; basin, wide, deep, plaited; core, small; seed, dark cinnamon, short, plump; flesh, whitish, fine texture, tender, juicy "good" at least. December to March. (W. D. B.)

Lake.

Grown by D. C. Richmond, Sandusky, O. Tree, abundant bearer, fruit hangs well; fruit, below medium, round ovate conical, yellow, mostly overspread and striped with deep lake red, many dots; cavity, deep; calyx, closed; basin, open; core, medium; seeds, plump; flesh, yellow, tender, juicy, sub-acid; "very good." October.

Late Queen.

Brown's Late Queen.

American Native of Ohio. Fruit, large, roundish conical, pale red on yellow, bluish tinge at stem end, and many large russet dots; calyx, closed; basin, deep, round, slightly furrowed; stem, medium; cavity, deep; flesh, yellowish, crisp, tender, sub-acid; "very good." September and October.

Leland Spice.

Leland Pippin, | New York Spice.

From Mass. Fruit, large, roundish, slightly conical, and ribbed; greenish yellow, mottled with crimson stripes, dark crimson in sun; stem, half inch; cavity and basin, ribbed; flesh, yellowish white, spicy, sub-acid; "best," October to December. Deserves more attention than yet received.

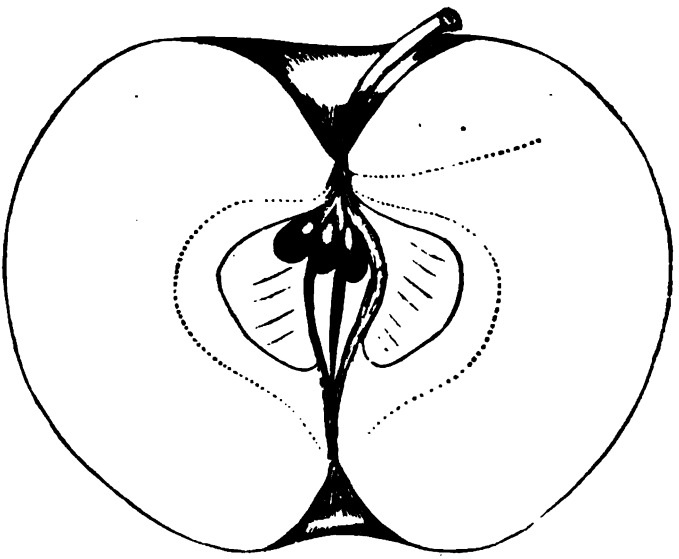
Ledge Sweet.

From Portsmouth, N. H. Tree, productive, regular bearer; fruit, large, roundish flattened; yellowish green, tinged with blush in sun, reddish russet specks; stem, short, stout; cavity, open, deep; calyx, partially closed; basin, shallow; core, open; seeds, light brown; flesh, yellowish white, fine, juicy, crisp, sweet. January to June. (Hov. Mag.)

Limber Twig.

James River.

A valuable fruit in Southern Ohio, Kentucky, and Indiana. Tree, hardy, productive; fruit, large, roundish, tapering a little to the eye; light yellow, striped and splashed with red in sun, rough russet specks, and occasional patch of russet; stem, long, slender; cavity, open, funnel shape, russeted; calyx, rather small; basin, irregular, round; core, large,



hollow; seeds, plump, pyriform; flesh, whitish, tender, sub-acid; "very good." Keeps to May.

For varieties of this, see Willow Twig, &c.

Lowre Queen.

Loure Queen.

Trees, upright, early bearers, extensively grown in Central Ohio; somewhat resembles the Vandervere. Fruit, medium, roundish flattened, oft, angular; yellow, striped and splashed with dull red, rough irregular dots, or specks of dull russet, russet at stem; stem, slender; cavity, regular, deep; calyx, with long pointed segments; basin, abrupt, broad, slightly furrowed; core, small; seeds, ovate; flesh, yellowish white, tender, juicy "very good." November to February.

Loudon Pippin.

Tree, productive, most grown in Northern Virginia; fruit, large, roundish conical; greenish yellow; stem, short; calyx, large; flesh, greenish; white, sub-acid; valued only for its size, where people know what apples should be.

Long Stem.

Below medium, roundish oblong, sometimes angular; skin, red in faint stripes, with a number of grey russet dots; stem, long; cavity, me-

dium, acuminate; basin, small, shallow, plaited; flesh, greenish white, tender; agreeably sub-acid flavor, with Spitzenburg aroma; quality, "very good." (W. D. B.)

This is distinct from the "Long Stem" of Cole, which is large, roundish, pale yellow, brown in sun; calyx, large; basin, broad, shallow; flesh, white, juicy, aromatic. September and October. A native of Mass.

Loring Sweeting.

Loring Sweet.

Native of Mass. Fruit, medium, oblate; greenish yellow, tinged with pale red in sun, brownish specks; stem, short; cavity, deep, open; calyx, medium, closed; basin, shallow; core, small; seeds, plump; flesh, yellowish white, crisp, juicy, tender, sweet; "very good" November to January.

Lyscom.

Matthew's Stripe, | Osgood's Favorite.

From Mass. Fruit, large, round, greenish yellow, broken stripes, and splashes of red; stem, short; cavity, deep; calyx, small; basin, plaited; flesh, fine grained, mild sub-acid. September to November.

Margaret.

Early Red Margaret,
Early June,
Red June,
June, *of some in Ohio*,
} *of South*,

Red Juneating,
Striped Juneating,
Early Red Juneating,
Eve Apple, *of the Irish*,

Margaretha Apfel, *of Germans.*

This should not be confounded with Early Strawberry; oftener grown as Red Juneating. Tree, a regular moderate bearer, upright downy shoots. Fruit, medium or below, roundish, oblong conical; green in shade, dark crimson red in sun; stem, short, thick; cavity, medium; calyx, half closed; basin, shallow; flesh, white, fine grained, tender; "very good." July.

Manomet.

Manomet Sweet, | Horseblock.

From Plymouth, Mass. Tree, vigorous, good bearer; fruit, medium, roundish; lemon yellow, bright red in sun, dotted with russet specks, and trace of russet at stem; stem, short, slender; cavity, shallow; calyx, large, closed, long segments; basin, shallow; core, compact; seeds, medium; flesh, yellowish, juicy, tender, sugary sweet; "very good." August and September.

Major.

Native of Pennsylvania, Northumberland Co. Size, large, roundish; red, sometimes blended with yellow on the shaded side; stem, variable in length, of medium thickness; cavity, rather wide, moderately deep; basin, uneven, shallow; flesh, yellowish, crisp; flavor, pleasant, agreeably saccharine, and resembles, in some measure, that of the Carthouse, to which, however, it is superior; quality, "very good." (W. D. B.)

Marston's Red Winter.

From New Hampshire. Tree, vigorous, productive; fruit, large, roundish ovid; yellow in shade, red in sun, russet at stem; stem, short, slender; cavity, deep; calyx, partly open; basin, abrupt; core, compact; seeds dark brown; flesh, yellowish, tender, juicy; "very good." Jan. to April.

Melvin Sweet.

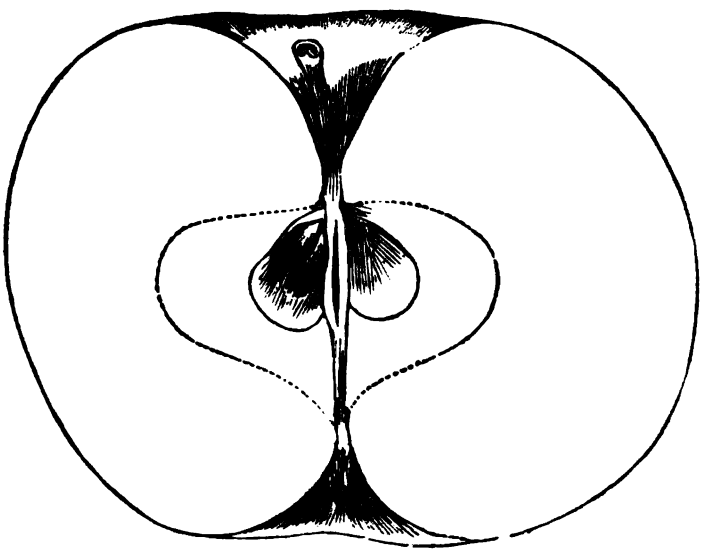
From Concord, Mass. Fruit, medium, roundish, yellowish green; striped with pale red; flesh, juicy, sweet. November to February. (Hov. Mag.)

Marks.

From Berks Co., Pennsylvania. Size, medium, roundish, tapering slightly to the crown, somewhat angular; yellowish white, with few russet dots, nearly covered with a faint orange blush; stem, half inch long; cavity, narrow, deep, acuminate; calyx, small, closed; basin, narrow, rather deep, slightly russeted; seed, yellowish gray; flesh, whitish, tender, fine texture; flavor, delicately perfumed; quality, "very good," if not "best." (W. D. B.)

Male Carle.

Mela Carla, Mela dé Carlo, | Pomme de Charles, Pomme Finale, Charles Apple.



Foreign. In our Southern and Southwestern sections, where the soil is rich and summers long, this is one of the very finest apples, and should always have a place. North it does not answer. Fruit, medium, globular, slightly tapering to the eye; pale waxeny lemon yellow, with distinct brilliant crimson cheek in sun, irregular russet dots, and oft marred by patches of mold or fungus when grown on the alluvial bottoms; stem, slender; cavity, narrow, deep, regular; calyx, small; basin, deep; core, small; seeds, round, ovate pointed; flesh, white, tender, delicate rose perfume; "best." October to January

Mouse.

Moose.

From Ulster Co., N. Y. Fruit, large, roundish conical; pale greenish yellow, brownish blush in sun, russet dots; stem, slender; calyx, closed; flesh, white, sprightly, faintly perfumed; not more than "very good." December to March.

Monarch.

A fruit considerably grown West; will yet probably prove identical with some variety already described. Fruit, medium, roundish conical; rich dark red over a lighter shade, with many specks; stem, long, slender; cavity, deep, open; calyx, small; basin, narrow, furrowed; core, medium; seeds, ovate pointed; flesh, white, slightly tinged with red, tender, perfumed; "good." October.

Monk's Favorite.

From Randolph Co., Indiana. Tree, very thrifty, rapid growth, annual bearer; fruit, large, roundish flattened, slightly angular; yellow, mottled, striped and splashed with dark red, gray russet dots; stem, short; cavity, open, regular; calyx, small; basin, broad, obscure furrows; flesh, yellowish white, sub-acid, tender; "very good." December to June.

McLellan.

Martin.

From Woodstock, Conn. Trees, moderate growth, annual productive bearers; fruit, medium, round; bright straw color, striped and marbled with lively red; stem, short, slender; cavity, round; calyx, nearly closed; basin, medium, slightly plaited; core, medium; seeds, small; flesh, white, fine grained, tender, mild sub-acid; nearly "best." December to March.

Mother.

From Massachusetts. Tree, hardy, moderate growth, annual bearer; fruit, large, roundish ovate; yellow, mostly overspread, marbled and striped with shades of dark red, few russet dots; stem, slender; calyx, small, nearly closed; basin, plaited; flesh, yellowish, tender, spicy, sub-acid; "very good." October to January.

Minister.

From Massachusetts. Tree, productive; fruit, large, oblong conical, ribbed; red striped on greenish yellow; stem, slender; calyx, small, closed;

basin, furrowed; flesh, yellowish white, coarse, spongy; "good;" showy. October to December.

Musk Spice.

Fruit, small, roundish flattened; yellowish, bright clear red cheek; stem, long; cavity, shallow; calyx, closed; segments, reflexed; basin, furrowed; flesh, yellowish white, juicy, tender, sub-acid; "very good." October.

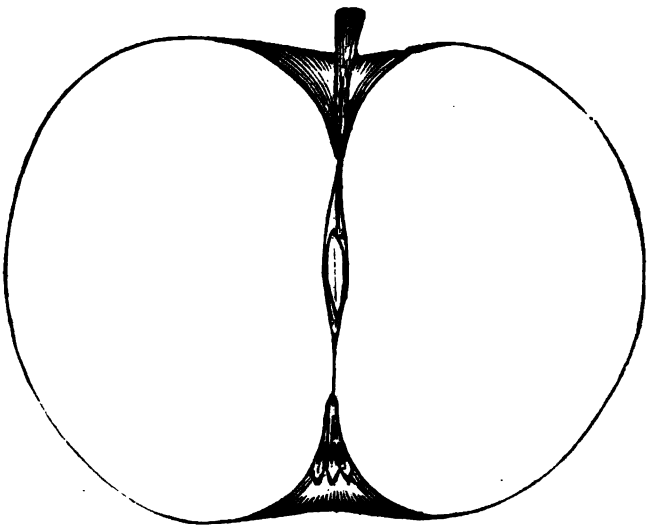
Munson Sweeting.

From Massachusetts. Tree, strong, upright grower, dark colored, short jointed shoots, good bearer; fruit, medium or above, roundish flattened; pale yellow, blush in sun; flesh, yellowish white, tender, rather dry, sweet; "very good." October to December.

Mifflin King.

From Mifflin Co., Pa. Fruit, small, oblong; red on yellow; flesh, tender, juicy, sub-acid; "best." October to December. (Pom. Trans.)

Myer's Nonpareil.



From Massillon, O. Tree, straight, stout growth, forming a compact head; an annual bearer of fruit uniform in size; fruit, large, roundish flattened; red and yellow marbled and splashed; stem, medium; cavity, regular; calyx, partially open; basin, not deep; flesh, yellowish white, tender, juicy, sub-acid; "best." October to December. New.

Newark Pippin.

French Pippin, | Yellow Pippin.

Tree, crooked, irregular growth; fruit, large, roundish, oblong; greenish to clear yellow, small black dots; cavity and basin, deep; flesh, yellow, tender, sub-acid; "very good." November to February.

Neversink.

From Berks Co., Pennsylvania. Fruit, large, roundish; exterior of an exceedingly beautiful waxen orange yellow color, with a few russet dots, and a delicately striped and richly mottled carmine cheek; stem, short and rather stout; cavity, narrow, acuminate, shallow; calyx, large; basin, deep, rather wide, furrowed; seeds, grayish yellow, acute ovate; flesh, yellowish, somewhat tough, owing probably to the fruit being much shriveled; flavor, approaching that of the Pine Apple; "quality, "very good." (W. D. B.)

Northern Sweet.

Northern Golden Sweet.

From Vermont. Tree, moderate grower, hardy, early abundant bearer; fruit, medium, roundish flattened, occasionally ribbed and angular; rich yellow, often carmine red cheek; calyx, nearly closed; basin, slightly furrowed; stem, rather stout, swollen at base; cavity, shallow; flesh, white, tender, sweet; nearly "best." November.

Orange.

Fall Orange.

From Connecticut. Tree, with dark colored stout shoots; early and productive bearer; fruit, large, roundish ovate; greenish to yellow; stem, short; cavity, deep; calyx, closed; basin, slightly plaited; core, small; flesh, greenish white, perfumed, tender, sub-acid · best when fresh from tree. October to December.

Orndorf.

From Putnam, Ohio. Fruit, medium, roundish, slightly angular; lemon yellow, rich red blush in sun, and few stripes and blotches of red; stem, slender; cavity and basin, deep; calyx, open; core, small; seeds, ovate; flesh, yellowish, juicy, crisp, tender, sub-acid; nearly "best." October and November.

Orne's Early.

Foreign. Fruit, large, somewhat ribbed; pale yellow, sprinkled with thin russet, dull red cheek towards the sun; flesh, white, tender, juicy. September. (Thomas.)

Old Town Crab.

Spice Apple, *of Va.*

Growth, strong, compact; fruit, small; greenish yellow, brown specks; flesh, crisp, fragrant, juicy, sweet. December to April. (Thomas.)

Osborn's Sweet.

Osborn's Fall Sweet.

Fruit, large, roundish lemon yellow, with specks; flesh, yellow, crisp, tender, sweet. October.

Overman's Sweet.

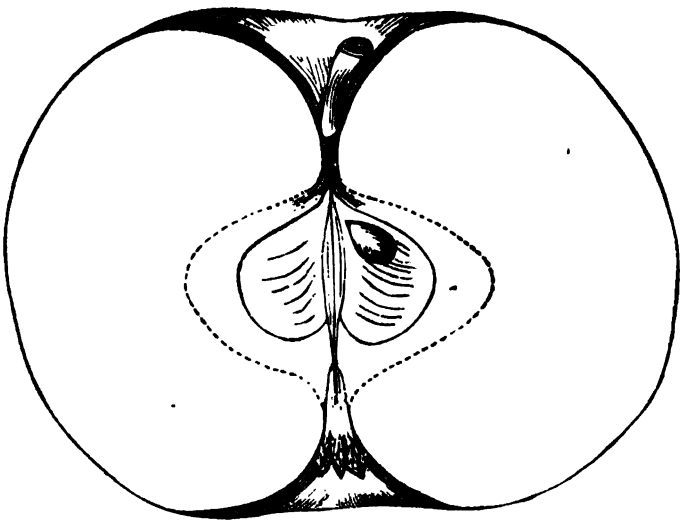
From Fulton Co., Ill. Fruit, medium, conical; pale yellow, striped with red; cavity, narrow, deep; calyx, closed; basin, obscure; flesh, white, firm, crisp, juicy, sweet; "very good;" baking. October and November.

Osceola.

From Indiana. Fruit, above medium, flat; yellow, striped with red, dotted with dark spots; stem, long; cavity, deep; flesh, yellowish, juicy, sub-acid. Keeps till May. Hov. Mag.)

Paradise Winter Sweet.

Honey Sweet, *of some.*

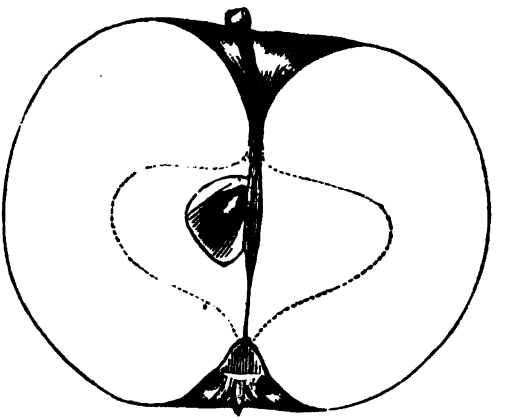


From Columbia Co., Pa. Tree, productive; fruit, large, roundish flattened; dull green, with a pale brownish blush; stem, short; cavity, rather deep; calyx, medium; basin, not deep; core, medium; seeds, ovate pyriform; flesh, white, fine grained, juicy, sweet; "very good." November to March.

Paragon.

Fruit, above medium, round ovate, flattened at ends; pale yellow, faint blush; stem, long, slender; cavity, deep; calyx, half open; basin, deep, slightly ribbed; core, medium; capsules, open; seeds, ovate pointed; flesh, yellow, crisp, brisk, juicy, sub-acid; nearly "best." November to February.

Peach Pond Sweet.



From Dutchess Co., N. Y. Tree, moderate growth, spreading; annual moderate bearer; fruit, medium, roundish; pale red, marbled and striped on yellow; stem, slender; cavity, open, slightly russeted; calyx, with segments in divisions; basin, deep; core, small; seeds, ovate pyriform; flesh, yellowish, tender, sweet; very good." October.

People's Choice.

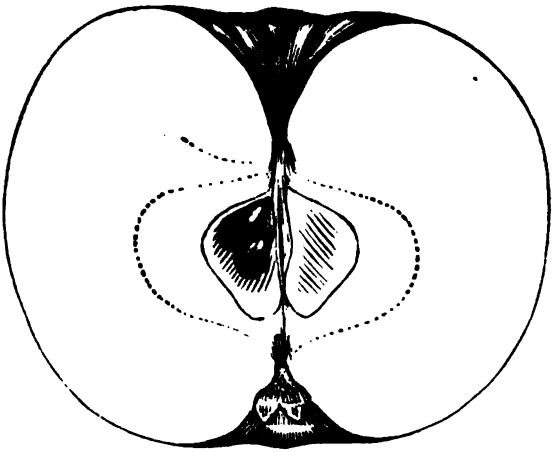
A small red apple, with peculiar markings; quality, "very good;" native of Chester County, Pa. (W. D. B.)

Pfeiffer.

From Berks County, Pennsylvania. Size, below medium, roundish; sparsely streaked with red on a yellowish green ground, (on the shaded parts, the streaks being more numerous,) and on a fawn colored ground, on the side exposed to the sun; stem, slender; narrow cavity; calyx, rather large; basin, wide, moderately deep, plaited. July. (W. D. B.)

Pickman.

Pickman Pippin.



From Massachusetts. Fruit, medium, roundish; yellow, with scattered shades of russet and small russet specks; stem, short; cavity, acuminate; calyx, large, half closed; core, medium, center somewhat hollow; seeds, light brown; flesh, yellowish white, crisp, sharp acid; valued for cooking. January to April.

Pine Apple Russet.

Hardingham's Russet.

Foreign. Fruit above medium; roundish ovate, greenish yellow, overspread with thin russet; stem, long; calyx, small; basin, shallow, plaited; flesh, yellowish white, juicy, crisp, spicy, sub-acid. October to November.

Pumpkin Sweet.

Lyman's Pumpkin Sweet, | Yankee Apple.

An old Connecticut fruit, only valued for baking. In wet soils or heavy clay, liable to be water-cored. We suspect the Pound Sweeting to be the same; bears regularly, and evenly distributed. Fruit, large, roundish, ribbed at base; yellowish green, whitish dots and streaks; stem, short; cavity, deep greenish, russeted; calyx, small; basin, irregular; flesh white, tender, sweet; "good." September to November.

Pumpkin Russet.

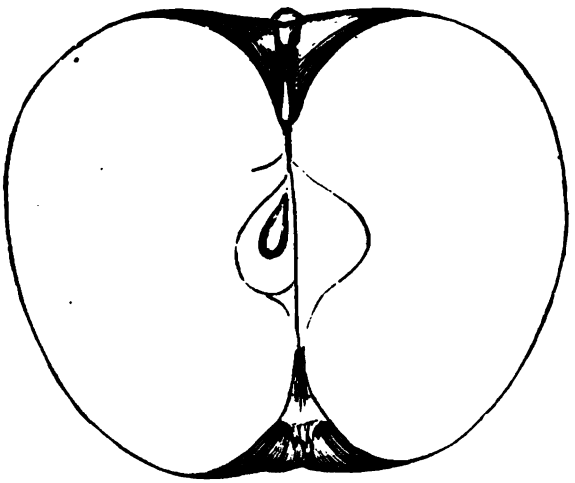
Sweet Russet, | York Russet,
Flint Russet.

Fruit, large; roundish; yellowish, green, thinly russeted; stem, long;

cavity wide, shallow; basin, small; flesh, dry, sweet; "good." September to December.

Primate.

Rough and Ready.



A variety lately come into favorable notice in Central New York, that may yet prove an old sort improved by soil and location. Fruit, medium, roundish, tapering to the eye; pale yellow; occasionally, blush red cheek; calyx, closed; basin deep; stem varying; cavity rather narrow; core, with open seed capsules; seeds, pyriform; flesh, yellowish white, very tender, delicate, juicy-mild sub-acid; "best." September and October.

Progress.

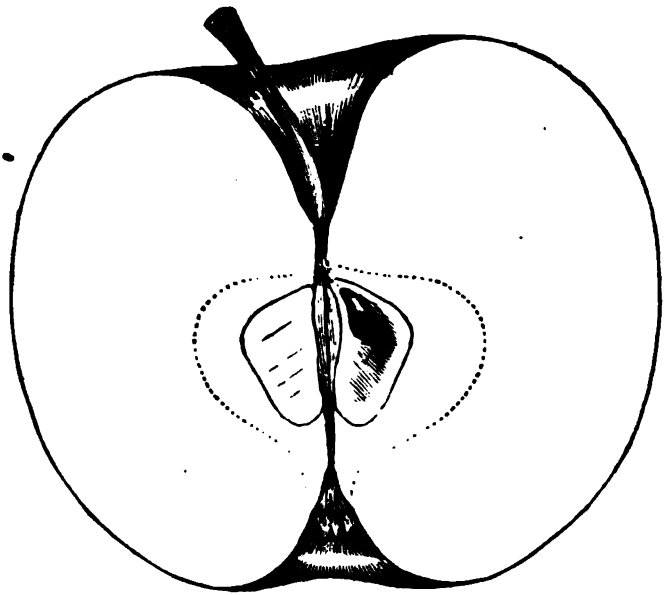
From Connecticut. Tree, vigorous, productive. Fruit, large; yellow, specked with greenish russet, blush in sun; conical; flesh, tender; keeps till Spring. (Hov. Mag.)

Quince.

Cole's Quince.

From New York. Originally described by Coxe. Great bearer; should be better known. Fruit, medium; roundish ovate, with ridges; pale yellow, occasional faint blush, little russet from the stem, distinct line or ridge from stem to calyx; stem, short; cavity, open; calyx, with long segments; basin, shallow, much ribbed; core, small, surrounded by broad concentric lines; seeds, short, ovate, dark brown; flesh, yellowish white, tender, juicy, aromatic perfume, sub-acid; "very good." December to March.

Ragan.



From Fulton County, Ill. New. Fruit, large, roundish; pale yellow, overspread, striped and marbled with light red, an occasional russet patch; stem, long, rather stout, curved; cavity, deep; calyx, small, nearly closed; basin, open, deep, slightly plaited; core, small; seeds, abundant; flesh, white crisp, little coarse, sharp sub-acid. Promises valuable as an early winter market variety.

Randel's Best.

Randal Bert.

Fruit, medium, globular slightly flattened; greenish yellow, mostly striped and overspread with dark red; stem, short; calyx, small; basin, shallow; core, compact; seeds, brown; flesh, white, tender, smooth-grained, sweet. November to February. (A. H. Ernst, Ms.)

Raritan Sweet.

From New Jersey. Tree, productive, valued for baking and stock. Fruit, medium, roundish ovate; dull yellow tinged with red in sun, irregularly scattered brownish red spots; stem, short; cavity, deep, little russeted; calyx, with bold stiff segments; basin, deep, irregular, slightly wrinkled; core, medium; seeds, ovate, pointed; flesh, white, tender, sweet. October, November.

Red Quarrenden.

Devonshire Quarrenden, | Sack Apple.

Foreign. Fruit, medium, roundish, flattened; clear deep red, with specks of russet green; stem, short; cavity, deep, russeted at base; calyx, large, half closed; basin, shallow, slightly ribbed; flesh, white, tender, sub-acid; "very good." Aug.

Red Sweet.

Grown by D. C. Richmond, Sandusky, O. Tree, good bearer; fruit uniformly fair, regular, heavy specific weight, valuable for dessert or cooking. Fruit, medium, round, flattened; yellow, overspread and striped with lively red; stem, short; basin, deep; calyx, with stiff closed segments; core and seeds, small; flesh, yellowish white, crisp, juicy, tender, sweet. Nov. to Feb.

Republican Pippin.

From Lycoming Co., Pa. Considerably distributed South and West. A poor bearer, on deep, rich limestone soils. Tree, strong grower, spreading habit. Fruit, large, roundish flattened; greenish yellow, mottled and striped with red, few large gray dots; stem, slender; cavity, narrow; calyx, small, nearly closed; core, small; seeds, brown; flesh, yellowish white, tender, sub-acid. Sept. to Oct.

Ribston Pippin.

Glory of York, | Travers,
Formosa Pippin.

Foreign. Valued in Northern sections, not esteemed South or Central. Fruit, medium, roundish; greenish yellow, russet near the stem, dull red in sun; stem, slender; calyx, small, closed; basin, open; core, small; seeds, flattened ovate; flesh, yellow, firm, crisp, aromatic, sub-acid. Nov. to Feb.

Roman Stem.

French Pippin, *of some.*

From New Jersey. Shoots slender, diverging; succeeds finely on the dry prairies, and on all rich limestone soils; productive. Fruit, medium, roundish oblong; whitish yellow, with brownish or red russet, and patches of blackish russet, unless well grown; stem, with a fleshy knob one side; cavity, russeted; calyx, small, closed; basin narrow; core, open, long ovate; seeds, ovate pointed; flesh, tender, juicy, sub-acid, sprightly; "very good." Nov. to Feb.

Ross Nonpareil.

Foreign. Tree, productive. Fruit, below medium, roundish; dull red, blotched and striped, over which is a marbling of thin mellow russet; stem, slender; calyx, medium; flesh, greenish white, juicy, sub-acid, aromatic; "very good," nearly "best." Oct. to Nov.

Selma.

From Clark Co., O. Fruit, medium to large, roundish, flattened; yellow, with pale russet patches, especially around stem, dull, faint red in sun; stem, long; cavity, narrow, deep; calyx, small, closed; basin, deep, abrupt; core, medium; capsules, small; seeds, ovate; flesh, yellowish white, breaking, mild sub-acid; "very good." Nov. to Dec.

Seever.

Seevers' Red Streak.

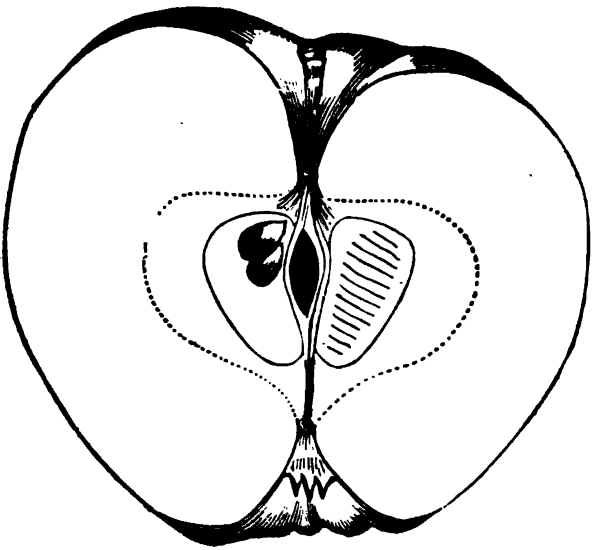
From Coshocton Co., O. Fruit, medium, globular; lemon yellow, striped with bright clear red; stem, short, slender; calyx, with long segments; basin, deep, open; core, small; seeds, roundish ovate; flesh, yellowish, juicy, sub-acid; "best." Oct. to Nov.

Schoonmaker.

Schoolmocker.

Probably Foreign. Grown in Detroit in 1804. Fruit, large, roundish flattened, sometimes angular; greenish yellow, bronzed blush in sun; skin, little rough; stem, short, stout; cavity, deep; calyx, small, closed; basin, open; core, small, compact; flesh, yellowish white, crisp, brisk, sub-acid; "very good." Jan. to March.

Scollop Gilliflower



This is entirely distinct from Red Gilliflower, with which it has been con-

founded. It requires rich, strong soil; is largely grown, and much esteemed in Central Southern Ohio. Fruit, medium to large, roundish conical, flattened at base, tapering toward the eye, sometimes angular, always much ribbed or scolloped; light yellow, striped and splashed with shades of light and dark red; stem, short, slender; cavity, deep, russeted, irregular; calyx, with long segments; basin, abrupt, deep, ribbed; core, large, hollow; seeds, ovate, rounded; flesh, yellowish, firm, crisp, tender, juicy, slight tinge of sweet. Nov. to Feb.

Siberian Crab.

The *Pyrus baccata* of botanists. There are a number of varieties, as, Red, Large Red, Yellow, Purple, Striped, Transparent, Oblong, Double White, Fragrant, Cherry, Showy, Astrachan, Currant, all used only for preserving, or grown for ornament.

Sine qua-non.

From Long Island. Slow, poor grower, and an indifferent bearer. Fruit, medium, roundish; greenish yellow; stem, slender; calyx, closed; flesh, greenish white, tender, juicy, mild, sub-acid. Aug.

Scarlet Pearmain.

Bell's Scarlet Pearmain, | Oxford Peach.

Foreign. A good bearer, valued on poor, light soils. Fruit, medium, conical; red on yellow; stem, slender; calyx, open; flesh, white, crisp, juicy, sub-acid; "good." Sep. to Oct.

Smith's Cider.

Extensively grown West. Fruit, medium, roundish, flattened; bright red and yellow, mostly red; stem, varying; cavity, regular; calyx, half closed, long segments; flesh, yellowish white, sub-acid; "very good;" varies much in soils. Nov. to Dec.

Sops of Wine.

Sops in Wine, | Sapson,

Foreign. Tree, vigorous, early bearer, esteemed for its peculiar pink flesh, as a curiosity for dessert. Fruit, medium or small, roundish; light red, nearly covered with bright purplish red, in streaks yellowish in shade with yellow specks, whitish bloom; stem, short, slender; calyx; with broad segments; basin, shallow, slightly furrowed; core and seeds, medium; flesh, yellowish, stained with pink, juicy, mild sub-acid; "very good." Aug. to Sep.

Sponge.

Fruit, large, round, flattened at base; yellowish green, with blotches and stripes of red; stem, short; cavity, shallow; calyx, closed; basin, open; core, large, open; flesh, white tender, juicy, sub-acid; very good." October.

Spring Pippin.

Springport Pippin.

Tree, unproductive, upright, thrifty Fruit, above medium, roundish; yellowish green, with few scattered minute dots; calyx, closed; stem, short; flesh, crisp, sprightly, sub-acid. Dec. to May.

Stanard.

Stanard's Seedling.

From Erie Co., N. Y. Tree, productive. Fruit, large, roundish; yellow, overspread with red; stem, short; cavity, open; calyx, closed; basin, ribbed; core, small; seeds, ovate pointed; flesh, yellowish, coarse, juicy, acid; not quite "very good." Nov. to Feb.

St. Lawrence.

Montreal.

From Canada. Fruit, large, roundish, flattened; pale yellow, striped and splashed with red and deep crimson; stem, short; cavity, open, deep; calyx, closed; basin, slightly furrowed; core, large; seeds, small; flesh, white, fine grained, tender, juicy, sharp sub-acid; "very good." Sept. to Oct.

Stroat.

Straat.

The Dutch name for Street, where the original tree is said to have grown. Fruit, above medium, roundish conical; yellowish green; stem, short; cavity, shallow; basin, small; flesh, yellow, tender, brisk sub-acid. Sep. to Nov.

Striped Pearmain.

Large Striped Pearmain, | Shorter.

Grown in Ky., from whence we have received fruit. We copy description from Mr. Ernst's manuscript. Fruit, medium to large, globular, slightly flattened; yellow striped and blended with two shades of red; calyx, small, closed; basin, shallow; stem, short, slender; core, open; seeds, large; flesh, yellow, tender, juicy, sub-acid. Dec. to Feb.

Summer Sweet Paradise.

From Columbia Co., Pa. Tree, abundant, early bearer, spreading shoots. Fruit, large, roundish, oblong, flattened at ends; pale green, yellow in sun, dark russet marblings and gray dots; stem, short; cavity, deep, oft russeted; calyx, with coarse segments partially closed; basin, deep; core, small; seeds, ovate pointed; flesh, yellowish white, crisp, juicy, sweet; "very good." Sep.

Summer Queen.

Lancaster Queen.

Extensively grown, profitable in some sections of Ohio; in Michigan

the reverse. Fruit, medium to large, roundish conical, tapering to the eye; yellow, striped and splashed with purplish red; stem, medium; cavity, narrow; calyx, large, open; basin, furrowed; flesh, white, sometimes a pink tinge, juicy, sub-acid; "very good." Aug. to Sep.

Summer Bellflower.

Summer Belle-fleur.

From Dutchess County, New York. Tree, strong, upright growth, spreading head, early regular bearer. Fruit, above medium, roundish oblong, slightly conical, two or three obscure ribs; clear yellow, few greenish dots, faint orange blush; stem, long, stout at base; cavity, shallow; calyx, closed, small reflexed segments; basin, five sided; core, medium, hollow; small seeds; flesh, white, fine grained, tender, sub-acid; "best." New. August, September. (Hort.) There is a Summer Bellflower grown in Ohio, which we have only once seen, which is an inferior fruit, distinct from above.

Sugar Sweet.

This apple I received from Hingham. Size, medium; ovate; dull yellowish, inclining to a russet; abundant bearer; ripe, September, October; a very rich baking apple; flesh, breaking and juicy. (B. V. French.)

Sweet Bellflower.

Butter, *of some.*

There are two apples cultivated in Southern Ohio under this name. We append Mr. Ernst's descriptions. Fruit, large, globular, flattened at base, slightly ribbed; lemon yellow, slight blush in sun, numerous light and dark specks; calyx, closed; basin, ribbed; stem, long, slender; cavity, deep; core, open; seeds, small; flesh, whitish yellow, breaking, juicy, slightly sub-acid. October, November.

Sweet Bellflower of Wyandott County. — Fruit, large, globular, slightly conical; light yellow, dark cloudy flakes and reddish specks; stem, short; calyx, large, partly closed; basin, shallow; core, small, compact; seeds, small; flesh, white, tender, sweet. November, December. There is also a Sweet Gilliflower, which closely resembles this, and may prove identical.

Sweet Pippin.

Moore's Sweeting, | Red Sweet Pippin, *of Indiana,*
Pound Sweet, *of some West.*

Fruit, medium to large, round, flattened; yellow striped and mostly covered with red, white bloom; stem, short; cavity, deep; calyx, closed; basin, broad; core, small; flesh, firm, rather dry, sweet, good baking. December to February. There is also a Sweet Pippin grown in South Ohio, which is globular, pale green, tender, juicy, open texture, sweet. Early Winter.

Sweet Winesap.

From Clark County, Ohio. Fruit, large, roundish flattened, rough skin, greenish yellow with blotches of dark green; calyx, medium; basin, open; stem, short; core and seeds, small; flesh, yellowish white tender, mild sub-acid, almost sweet. November, December.

Spice Russet.

Sweet Russet, *of some erroneously.*

Fruit, below medium, roundish flattened; light yellow russet, numerous small fine dots; exposed to sun, carmine and yellow bronzed; stem, slender; cavity, narrow; calyx, closed; basin, shallow; core, large, somewhat hollow; seeds, ovate; flesh, white, slightly tinged with yellow, fine grained, juicy, slightly sweet, aromatic; "very good." December to March.

Tewksbury Blush.

Tewksbury Winter Blush, | Fink's Seedling.

From New Jersey. Tree, rapid, rather upright growth, very productive, always fair, great keeper. Fruit, small, round ovate flattened; yellowish green, with minute russet dots and occasionally a red cheek; stem, slender; calyx, small; basin, shallow; core, medium; seeds, light brown; flesh, yellowish white, juicy, firm, tender, sub-acid. January to August.

Townsend.

From Pennsylvania. Tree, moderate spreading growth, abundant early bearer. Fruit, medium, roundish; pale yellow, overspread and streaked with red in sun, marblings of russet at stem, grayish white dots rough, blue bloom; stem, slender; cavity, deep; calyx, closed, segments narrow in divisions; basin, abrupt, medium; core, medium; seeds, ovate; flesh, yellowish white, breaking, rather dry, sub-acid; "very good." September.

Trumbull Sweeting.

Fenton Sweeting.

From Trumbull County, Ohio. Fruit, above medium, roundish flattened; pale yellow, slight blush and red spots; stem, short; cavity, deep; calyx, large; basin, deep; flesh, white, tender, juicy, sweet; "very good." September to November.

Virginia Greening.

Fruit, large, roundish oval, flattened at ends, slightly angular; dull greenish yellow, brownish in sun, scattered brown specks with whitish green circle suffused around them; stem, medium; cavity, acuminate; calyx, large, short segments; core, small; seeds, long ovate; flesh, yellowish white, mild sub-acid; not quite "very good." December to March. Esteemed at the South as a keeper.

Waddel's Hall.

Another Southern rarity. Fruit, medium, oblong; dull greenish yellow striped with red; flesh, whitish, sub-acid; great keeper.

Walworth.

Vermont, | Large Golden Pippin.

From New Jersey. Fruit, large, roundish conical; clear yellow, bright red in sun, dotted with greenish russet specks; stem, short, slender; calyx, small, closed; basin, furrowed; core, large, open; seeds, plump; flesh, yellowish white, tender, juicy, sub-acid. October. (Hov. Mag.) We suspect this an old variety under a new name.

Walpole.

From Massachusetts. Fruit, large, roundish tapering to the eye; yellow with bright red stripes, deepest in sun and yellowish specks; stem, short; cavity, open; calyx. closed; basin, slightly ridged; core, large, open; seeds, large; flesh, yellowish tinged with pink, tender, juicy, brisk sub-acid. August and September. (Hov. Mag.) The following description of the Sparhawk is from B. V. French, Esq. We suspect the two identical. The Sparhawk originated in Walpole, N. H., and is known in the family of Mr. Sparhawk, on whose farm it was found as the "Gall" Apple. It was introduced to our Society by A. De Copen, of Dorchester, and the Society gave it the name of Sparhawk. It is a large Apple; oblate; skin smooth and glossy; color, yellowish ground, striped with red; abundant bearer; the size, color, and gloss, serve to give it a desirable appearance; flesh, firm, with a sprightly acid; highly desirable for cooking, and is ripe September, October, but will keep longer; it will class well with the 20 oz. Pippin.

Wells' Sweeting.

From Newburgh, N. Y. Tree, strong, upright growth. Fruit, medium, roundish; dull light green, brownish red cheek; stem, slender; calyx, small; basin, shallow; flesh, white, tender, juicy sweet; "very good." Nov. to Jan.

Wells.

Hogan, | Striped R. I. Greening,
English Winter Red Streak, *of some*, | Well Apple.

An old variety, probably originally from Maryland. It is much grown in Central and Southern Ohio, as Wells; hence we give the name. It is only good on strong clay soil. Fruit, large, roundish, narrowing to the eye; yellowish green, streaked and blotched with red; calyx, closed; basin, shallow; flesh, white, tender, juicy, sprightly, sub-acid; "very good." Nov. to March. The trees grow vigorously, spreading tops, slender branches, bear abundantly every year. There is also a "Cook's Well Apple," grown in Indiana, that originated in Ohio. It is a great and regular bearer, small size, largest at blossom end; stem, slender; flesh, "good;" keeps well.

Western Spy.

From Southern Ohio. Tree, vigorous, slender, spreading. Fruit, large, roundish flattened; pale yellow, with red, becoming brilliant on sunny side, small white specks; stem, short; cavity, narrow; calyx, large; basin, deep; flesh, yellowish, tender, juicy, sharp sub-acid; "very good." Dec. to March.

White Sweeting.

Wetherill's White Sweeting.

From New Jersey. Tree, vigorous; productive on light soils. Fruit, large, roundish oblong; pale yellow; stem, short; flesh, white, sweet, valued for baking and for stock. Sep.

Whitewater Sweet.

From Southern Ohio. Fruit, medium, round; bright yellow, with dark spots; stem, short; calyx, slightly sunk; flesh, yellowish, firm, juicy, sweet; keeps till May. (Hov. Mag.)

White Seek-no-further.

Pomme Royal, *of some*, | Pound Royal,
Flushing Seek-no-further.

From Long Island. Tree, healthy, not strong grower; abundant, not regular bearer. Fruit, medium to large, roundish oblong, conical, uneven or waived surface; yellowish green, rarely a faint brownish blush, small brownish dots, light shade of green suffused around underneath skin; stem, slender; cavity, irregular, acuminate; basin, broad, abrupt, furrowed; core, open; flesh, fine grained, very juicy, tender, sub-acid; "best." Nov. to Feb.

White Juneating.

Juneating, | Owens' Golden Beauty,
Caroline, | Early May,
Carolina, *of some*.

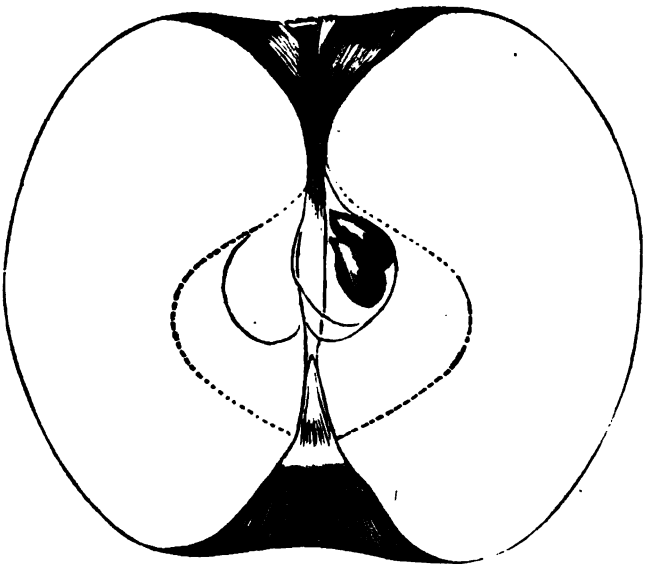
Foreign. Its early maturity, its chief merit. Tree, fair, upright growth, moderately productive. Fruit, small; pale green, marbled slightly with a darker shade, small russet dots; stem, medium; cavity, shallow; calyx, closed; broad basin; seeds, dark brown; flesh, white, tender, juicy, sub-acid. Last of June, early July.

White Spanish Reinette.

Reinette Blanche d'Espagne, | D'Espagne,
De Ratteau, | Concombre Ancien.

Foreign. Probably the parent of Fall Pippin. Fruit, large, roundish oblong, sometimes ribbed; calyx, large, open; basin, deep, irregular; stem, half inch long; cavity, even; color, yellowish green; flesh, yellowish white, crisp, sharp sub-acid; valued for cooking. Nov. to Feb.

WHITE RAMBO.



Considerably grown and esteemed in Central Southern Ohio. Fruit, large, roundish, flattened at ends; skin, rough, yellow, russet dots and spots, which, in sun, are of a reddish tinge; stem, stout; cavity, broad, open; calyx, large, segments, in divisions; basin, large, open, deep; core, small; seeds, round ovate, plump; flesh, yellowish, rather coarse, breaking, mild sub-acid; "very good." Nov. to Feb.

WINTER HARVEY.

Fruit, large, conical, slightly ribbed; pale yellow; stem, short; flesh, yellowish, firm, tender, juicy. Dec. to April. (Hov. Mag.)

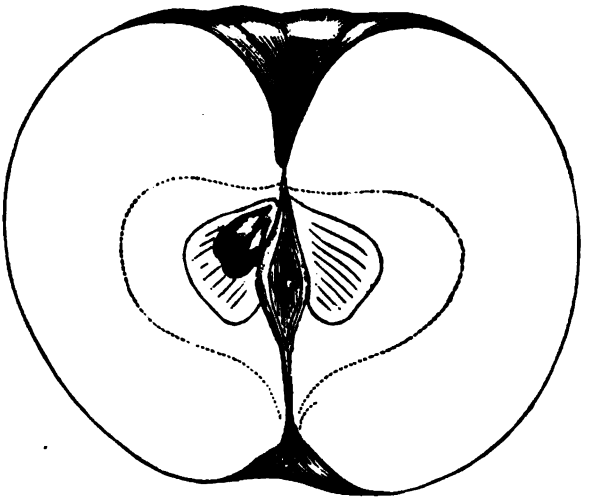
WILLIAMS.

William's Favorite, | Williams' Red,
Williams' Favorite Red, | Williams' Early Red,
Williams' Early.

From Mass. Tree, medium growth; shoots, reddish brown. Fruit, medium to large, oblong; fine clear red, very dark in sun; calyx, closed; basin, narrow; stem, slender; flesh, yellowish white, tender; "very good." Aug.

Willow.

Willow Twig? | Willow Leaf?

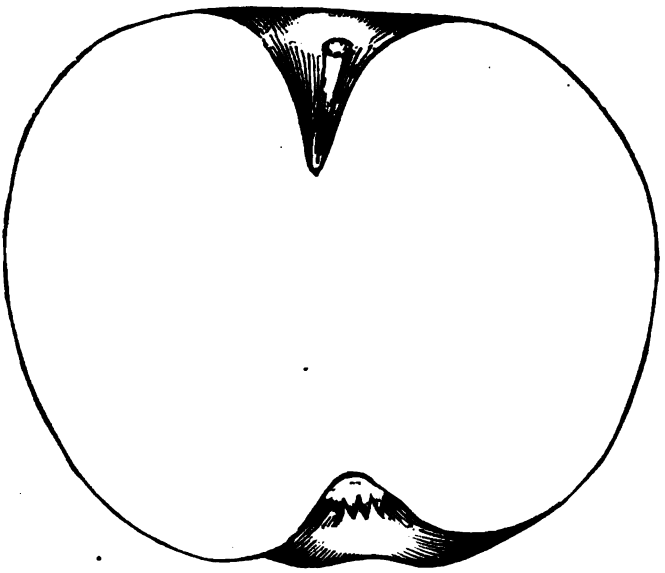


Under these names we have examined specimens, and although there is a slight difference, we are inclined to think it only from varied location and soil. The variety came from New Jersey. It is esteemed for orcharding on rich bottom lands or prairies, being a good bearer, great keeper, and valuable for Southern exportation. Fruit, above medium to large, roundish; dull yellow, striped, splashed or mottled with light and dark red; calyx and basin, medium; stem, generally short, slender; cavity, roundish acuminate; core, rather small; seeds, oblong pyriform; flesh, yellowish, rather dry, breaking, mild sub-acid; not quite "very good." Dec. to May.

William Penn.

A native of Columbia, Pennsylvania. Rather large, roundish oblate, slightly conical; color, grayish, delicately mottled, and striped with red on a greenish yellow ground, with numerous white specks, in the centre of which, is a minute russet dot; stem, short, not very stout, sometimes fleshy, inserted in an open, rather deep, russeted cavity; basin, sometimes wide and shallow, usually narrow, rather deep and furrowed; flesh, greenish yellow, juicy, with a delicious Spitzenberg aroma; quality, "very good," if not "best;" represented as being an abundant bearer. (W D. B.)

WINSLOW.



From Virginia. Fruit, large, globular, flattened at base, rounded towards calyx; dark and light red, somewhat streaked, little russet near calyx, light brown specks, and dark flakes; calyx, open, segments, short; basin, expanded; stem, short, slender; cavity, narrow, rather deep; core, small, compact; seeds, plump, dark brown; flesh, yellowish white, tender, juicy, sub-acid. Fall and early winter. (A. H. Ernst's, Ms.)

WING SWEETING.

Fruit, small, round, flattened; light and dark red indistinctly striped on light yellow; calyx, small, closed; basin, broad, deep; stem, long; cavity, narrow; core, small; seeds, ovate; flesh, reddish yellow, dry, sweet, productive. Winter.

WINTER PEARMAIN.

This is distinct from, and far inferior to the Herefordshire Pearmain. Fruit, medium, oblong ovate; dull red on greenish yellow; stem, slender; cavity, narrow; basin, small; flesh, greenish yellow, not juicy, tender, sub-acid; not quite "very good." December to March.

YOST.

Rather large, roundish, oblate, beautifully striped and delicately mottled

with crimson on a yellow ground; stem, short; wide deep cavity; flesh, yellowish, tender, juicy, pleasant flavor; "very good" quality. (W. D. B.)

Yacht.

Medium, roundish; striped with red of various hues on yellowish ground; stem, half an inch long; cavity, open, obtuse; basin, very shallow, plaited; flesh, fine texture, tender, pleasant flavor; "very good." (W. D. B.)

York Imperial.

Johnson's Fine Winter.

From York County, Pennsylvania. Size, rather below medium; truncated-oval, angular; the unexposed side is mottled and striped, so as to present a grayish red aspect on a greenish yellow ground, and, on the sunny side, the color is a dull crimson; stem, short and moderately stout; cavity, wide, and rather deep; calyx, small, closed, and set in a deep, wide, plaited basin; flesh, greenish white, tender, crisp, juicy; flavor, pleasant and agreeably saccharine; quality, at least "*good*, to many tastes "*very good*." (W. D. B.)

CLASS III.—*Unworthy of Cultivation.*

Alfriston.

Foreign; large, oblong, pale green, orange in sun, flesh crisp, acid; October, December.

American Pippin.

Grindstone, | Green Everlasting.

Medium, roundish flattened, dull green, patches of dull red, flesh white, firm, acid; January to June.

Augustine.

American; large, conical, red striped on yellow, flesh sweet, dry; August

Aurora.

Dunlap's Aurora.

American; large, red striped on yellow, roundish ovate, flesh yellowish, subacid; early winter.

Autumn Romanite.

American; medium, round, red, flesh yellow; September

Barr.

Barr.

American; medium, roundish, oblong, red striped on greenish yellow, flesh greenish white, poor.

Barnhilt.

American; small, conical, yellow striped with red, flesh white, tough, dry; October, November.

Beauty of America.

Large, roundish, flattened, yellow with blush cheek, flesh yellowish, tender, poor bearer; November to January.

Beauty of the West.

Large, round, red striped on greenish yellow, flesh coarse, sweet; October, November.

Beauty of Kent.

Foreign; large, roundish, greenish yellow, striped with purpled red, flesh tender, inferior; October, November.

Bedfordshire Foundling.

Foreign; large, roundish, green, flesh yellowish, acid; November, December.

Blenheim Pippin.

Blenheim Orange, | Woodstock Pippin.

Foreign; large, roundish, yellow and dull red, flesh yellowish, sweet, dry; October, November.

Black Annette.

American; small, roundish, dark red; November.

Black Lady Apple.

Api Noir.

Foreign; small, roundish, blackish red, flesh white, stained; November to March.

Black Gilliflower.

Large, oblong conical, dull reddish purple, flesh greenish white, dry, sub-acid, poor; November to March.

Borsdorffer.

Borsdorff, Queen's. | King George the Third,

Foreign; medium, roundish oval, pale yellow, with red cheek, flesh yellowish white crisp, sub-acid; November, December.

Borovitsky.

Foreign; medium, roundish, pale green, striped red, flesh white, sub-acid; August, September.

Buff.

Granny Buff.

American; large, roundish flattened, yellow, overspread with red, flesh yellowish, spongy; November, March.

Bullet.

Bartlett, | Priestly, *of some.*

American; medium, oblong, bright red on yellow, flesh light yellow, inferior; January to June.

Chandler.

Winter Chandler.

American; large, roundish, imperfect, dull red on yellow, flesh greenish white, sub-acid; November, February.

Caroline.

Foreign; medium, round, yellow, streaked with red, flesh firm, acid; November, February.

Cathead.

Cathead Greening, | Round Cathead.

Large, roundish, yellowish green, flesh white, coarse, sharp acid; October, November. There is another one of this name equally worthless, same shape, but striped yellow and red.

Catline.

Gregson, | Winter Grixon.

Medium, roundish, greenish yellow, red in sun, flesh pale yellow, nearly sweet, for cider; October, December.

Cash Sweet.

American; medium, round conical, light red, flesh white, coarse, sweet, dry; October, November.

Cheeseborough Russet.

Howard Russet, Kingsbury Russet, | York Russet, *of some,* Forever Pippin, *of some West.*

American; large, conical, thin russet on greenish yellow, flesh greenish white, coarse, dry, sub-acid; October, November.

Cos, or Caas.

American; large, roundish, greenish yellow, red streaks, flesh white, tender, sub-acid, December to March.

Cornish Gilliflower.

Cornish July flower, | Pomme Regelans,
Egg Top, *of some.*

Foreign; medium, oblong ovate, pale yellowish green, brown cheek, flesh yellowish, acid; November to February.

Connecticut Summer Sweet.

American; medium, roundish, yellow and red striped, flesh yellowish, sweet, tough; August.

Cranberry Pippin.

American; above medium, roundish, clear yellow, red cheek, flesh white, juicy, sub-acid; November, December.

Donnelan's Seedling.

American; medium, roundish, greenish yellow, dull red stripes, flesh yellowish, dry, sub-acid; September.

Downton Pippin.

Downton Golden Pippin, | Knight's Golden Pippin,
Elton Pippin.

Foreign; small, roundish, yellow, flesh yellowish, sharp acid; October, November.

Dumelow's Seedling.

Dumelow's Crab, | Wellington Apple.

Foreign; medium, round, yellow with blush red, brown spots, flesh yellow, acid; November to March.

Dumpling.

Crooked Limb Pippin, | French Pippin, *of Indiana,*
Watson's Dumpling.

Large, roundish, oblong, light yellow, blush in sun, flesh white, indifferent; October, December.

Dutch Codlin.

Chalmer's Large.

Foreign; large, roundish, oblong, pale yellow, orange in sun, flesh white, sub-acid; October, December.

Egg Top.

Eve,
Sheep Nose, *of some,* | Round Top,
Wine, *of some West.*

Foreign; medium, oblong ovate, pale yellow, striped with red, flesh yellowish white, tender, inferior; November to February.

Easter Pippin.

Young's Long Keeper, | Ironstone Pippin.
Claremont Pippin, | French Crab.

Foreign; medium, roundish, deep green, brownish blush, flesh greenish, inferior; November to June.

Fall Cheese.

Gloucester Cheese, | Summer Cheese.

American; medium to large, roundish, greenish yellow, flush of red in sun, flesh crisp, often mealy; September to November.

Fama Gusta.

Foreign; large, conical, pale green, flesh white, acid; October.

Ferris.

American; medium, roundish, red, sub-acid, new, but surpassed by many others; November to February.

Fennouillet Rouge.

Black Tom, | Bardin.

Foreign; small, roundish, dark red, flesh firm; November to January.

Fennouillet Gris..

Pomme d'Anis, | Caraway Russet.

Foreign; small, roundish, russet on yellow, flesh firm, acid.

Flower of Kent.

Foreign; large, roundish, flattened, dull yellow and red, flesh greenish yellow, coarse, sub-acid; October, January.

Gault's Bellflower.

American; large, roundish, pale yellow, flesh white, coarse; October, December.

Gloucester White.

American; medium, roundish, oblong, bright yellow, black patches, flesh breaking, dry; October, November.

Goble Russett.

Sweet Seek-no-further.

Medium to large, oblong, flattened, yellow russet, marbled with red, flesh whitish yellow, dry, sweet; October, December.

Golden.

American; medium, roundish, ribbed, light yellow, flesh yellowish, acid; July.

Golden Reinette.

Aurore, | Kirke's Golden Reinette,
Yellow German Reinette, | Wyker Pippin, &c., &c.

Foreign; small, roundish, greenish yellow, a little red, flesh yellow, crisp, mild sub-acid; October, January.

Golden Harvey.

Brandy Apple.

Foreign; small, roundish, russet on yellow, reddish cheek, sub-acid; November to March.

Golden Pearmain.

Ruckman's Pearmain, | Dutch Pearmain,
Red Russet.

Medium, roundish, flattened, red russet, flesh yellowish, dry, sub-acid; November, December.

Goodyear.

Goodyear's Seedling.

American; new, medium, roundish, red, flesh juicy, only valuable as a keeper.

Governor.

American; large, yellowish, tinged with red, juicy, acid, cooking; October, January.

Golden Pippin.

English Golden Pippin, | Old Golden Pippin, &c., &c.,
Eleven other names.

Foreign; small, round; yellow, with irregular russet marblings; stem, long, slender; basin, shallow; flesh, yellow, fine grained, sub-acid, sprightly; December to March. There is an "English Golden Pippin" grown at the west, which is large, oval, basin deep, entirely distinct from above.

Grand Sachem.

Large, roundish, ribbed, dull red, flesh white, dry; September.

Giant:

American; large, roundish, dull red striped, flesh, greenish white, tender; "good."

Hannah.

American; medium, conical, pale yellow and dull red, flesh white, dry; October, November.

Hawthornden.

White Hawthornden.

Foreign; above medium, roundish flattened, pale yellow, blush in sun, flesh white, acid; October, November.

Hepper.

American; small, roundish, yellow, flesh dry.

Hoary Morning.

Dainty Apple, | Downy,
Sam Rawling's.

Foreign; large, roundish, red striped on yellow, flesh pinkish; October, December.

Heterich.

American; medium, round, yellow, flesh whitish, acid; November, January.

Hollandburgh.

Hollandbury.

Medium, roundish, flattened, red on yellow, flesh white, sour; December, February.

Irish Peach Apple.

Early Crofton.

Foreign; medium, roundish, conical, yellowish, streaked with red, flesh whitish, watery; September, October.

Kane.

Cane, | Cain.

American; medium, roundish, striped crimson, flesh yellowish, beautiful to look at; Autumn.

Kerry Pippin.

Edmonton's Aromatic.

Foreign; medium, roundish, oval, yellow, streaked with red, flesh firm, crisp; September, October.

Keim.

New; American; small, roundish, conical, yellowish white, flesh white, "good."

Kentish Fill Basket.

Potter's Large Grey Seedling, | Lady de Grey's.

Foreign; large, roundish, ribbed, yellowish, brownish blush, flesh tender; October, January.

Kenrick's Autumn.

American; large, roundish, yellowish, green, striped red, flesh white, acid; September.

Kilham Hill.

American; large, roundish, ribbed, pale yellow and red, flesh dry; September.

King of the Pippins.

Hampshire Yellow.

Often grown west as Gravenstein. Medium, roundish, oblong, yellow and red splashed, flesh white, slightly sweet, not agreeable; October, November.

Kirke's Lord Nelson.

Foreign; large, roundish, red on pale yellow, flesh firm, juicy, acid; October, December.

Ladies' Blush.

American; medium, yellow, with red blush, flesh dry.

Lady Finger.

Sheep Nose.

Medium, oblong, pale yellow, faint blush, flesh firm, watery; November, December.

Lane Sweet.

Small, roundish, flattened, yellow with red, flesh yellowish, dry; November.

Lemon Pippin.

Kirke's Lemon Pippin.

Foreign; medium, oval, pale greenish yellow, flesh firm, sub-acid; October, January.

Long Island Russet.

Medium, roundish oblong, dull yellowish russet, flesh greenish, dry; December, March.

Loan's English Pearmain.

Small, roundish conical, dull red and russet, flesh firm, almost worthy culture; September, October.

Longville's Kernel.

Sam's Crab.

Foreign; below medium, oval, flattened, brownish red on yellow, flesh firm, sub-acid; August, September.

Long John.

American; large, conical, greenish yellow, flesh yellowish white, dry, great keeper.

Lucombe's Seedling.

Foreign; large, roundish conical, yellow spotted with red in sun, flesh whitish, firm, cooking; October, December.

Luce's Early Joe.

American; small, round, bright red on yellow, flesh crisp, inferior; September.

Mank's Codlin.

Irish Pitcher, | Frith Pitcher.

Foreign; medium, roundish, oblong, pale yellow, red cheek in sun, cooking only; August.

Margil.

White Margil.

Foreign; small, roundish, dull yellow, streaked with red, flesh white, tender; early Winter.

Marble Sweeting.

Virginia Sweet, | McIntire's Sweeting.

American; medium to large, roundish ovate, marbled, dull red and yellow, flesh sweet, dry; November, February.

May Seek-no-further.

May Apple.

Outwardly like Pryor's Red; flesh dry, coarse, only valued as a keeper, skin thick.

Mauck.

Large, greenish yellow, blush in sun, conical, flesh "good."

Menagere.

Menagerie.

Foreign; large, flat, pale yellow; September to January.

Monstrous Pippin.

Gloria Mundi, | New York Gloria Mundi,
American Mammoth, | Ox Apple,
Baltimore Pippin.

Very large, greenish yellow, roundish, flesh white, acid; October, December

Mother Davies.

Medium, round, oblong, greenish yellow, little red, flesh crisp, "good;" October, November.

Molasses.

Butter.

American; small, roundish, red, dry, sweet; October.

Milam.

Harrigan, | Winter Pearmain, *of some.*

American; small to medium, roundish, greenish yellow, striped, dull red, flesh greenish, insipid; December March.

Murphy.

Murphy's Red, | Jack Murphy.

American; large, roundish, oblong, pale and dark red streaked, flesh greenish white, "good;" November, February.

Newark King.

Hinckman.

American; medium, conical, red on greenish yellow. flesh tender, little more than good; November to February.

Norfolk Beaufin.

Read's Baker, | Catshead Beaufin.

Foreign; large, flat, dull red on greenish, flesh sub-acid, good drying; November to May.

Nonsuch.

English Nonsuch.

Foreign; medium, flat, greenish yellow, with dull brick red, flesh white; October, November.

Old English Codlin.

English Codlin.

Large, oblong, conical, lemon yellow, flesh white, tender, cooking; July to November.

Old Royal Russet.

Leather Coat Russet.

Foreign; medium, roundish, gray russet on green, flesh greenish white, sharp sub-acid; November, February.

Old Nonpareil.

Non Pareille.

Foreign; medium, flat, yellowish reddish brown, flesh firm, crisp, poor bearer; December, January.

Oslin.

Arbroath Pippin.

Foreign; small, roundish, pale yellowish, flesh firm, crisp, acid; August.

Parson's Early.

American; medium or above, roundish, pale yellow, flesh yellowish white, sharp, sub-acid; August, September.

Pennock.

Pomme Rouge, *of some West*, | Large Romanite,
Big Romanite, | Red Pennock,
Pennock's Red Winter, | Prolific Beauty,
Neisley's Winter.

American; large, roundish, conical, angular, dull red, little yellow, flesh coarse, dry rot; November to March

Polly Bright.

Resembles Maiden's Blush, sharp acid; September, October.

Pound.

Large, roundish, oblong, yellowish green, coarse, poor; October, January.

Pomme de Rose.

Large, roundish, flattened, red on yellow, small dots, flesh white, coarse, acid; December, February.

Priestley.

Priestley's American, | Red Cathead.

Large, roundish, oblong, dull red, streaks of yellowish green, flesh greenish white, inferior; December to March.

Quaker Pippin.

American; medium, greenish yellow, very acid; October.

Red and Green Sweet.

Prince's Red and Green Sweet, | Large Red Sweeting,
Red Bough.

American; very large, oblong conical, green and red striped, flesh sweet poor; August, September.

Red Ingestrie.

Foreign; small, oblong ovate, yellow marbled with red, flesh firm, sprightly; September, October.

Red Gilliflower.

Red Seek-no-further, | Harkness' New Favorite.

American; medium, oblong conical, fine red, flesh white, mild sub-acid; November to January.

Red Calville.

Red Winter Calville, | Calville Rouge,
Calville Rouge d'Hiver, | Spice, *of some West.*

Foreign; above medium, roundish oblong, pale red, dark red in sun, flesh tender, poor; November, February.

Red Bellflower.

Red Belle Fleur, Belle Fleur Rouge, | Belle Fleur, Striped Belle Fleur, *of some.*

Foreign; large, oblong conical, greenish yellow, covered and striped with red, flesh white dry; November, January.

Red Streak.

Herefordshire Red Streak, | Scudamous Crab.

Foreign; medium, roundish, red, yellow streaks, flesh yellow, dry, cider only; October, December.

Rymer.

Foreign; above medium, roundish, flattened, clear red, glossy, flesh white, sharp, acid; October, December.

Roseau d'Automne.

Roseau, *incorrectly, of some.*

Foreign; medium, roundish ovate, flat at base, yellow, blush red cheek, flesh yellowish, crisp, acid; November to January.

Roseau.

Foreign; large, dark red, irregular in size and form, unprofitable.

Rule's Summer Sweeting.

American; medium, oblong, yellow, poor; August.

River.

American; medium, oblate-ribbed, red striped on yellowish green, flesh greenish white, coarse; July, August.

Scarlet Nonpareil.

New Scarlet Nonpareil.

Foreign; medium, roundish, deep red on yellowish green, flesh firm, acid; November to February.

Shippen's Russet.

Large, roundish, flattened, russet on greenish yellow, flesh white, spongy, acid; January to March.

Shipley Green.

American; medium, oblong, rusty red, acid; all Winter; cooking only.

Skunk.

Polecat.

American; large, flat, dull dark red on yellow, flesh yellowish, dry; December, January.

Spring Grove Codlin.

Foreign; medium, oblong rounded, greenish yellow, flesh greenish, sub-acid, cooking; August, November.

Springer's Seedling.

American; small, oblong oval, dull yellowish green, stripes of red, flesh firm, negative; January to May.

Spice Sweeting.

Poor bearer, large, roundish, yellowish, flesh firm, sweet; August, September.

Striped Mohawk.

Above medium, round, red striped on yellow, flesh dry, poor; late Autumn.

Sugar Loaf Pippin.

Sugar Loaf Greening.

Foreign; large, oblong conical, dull greenish yellow, brownish in sun, flesh "good;" August, September.

Summer Golden Pippin.

Foreign; small, roundish oblong, yellow, flesh whitish, firm, sweet; August, September.

Summer Rambour.

Summer Rambo, | Rambour Franc,
Rambour d'Ete.

Foreign; above medium, greenish yellow, streaked with red, roundish, flattened, apt to be mealy; August.

Summer Russet.

American; small, roundish conical, yellow, partly russeted, sweet, dry; September.

Sweet and Sour.

Medium, roundish, flattened, greenish, only valued as curiosity. From a diseased propagation.

Surprise.

Foreign; small, round, whitish yellow, flesh stained with red; November, December.

Sweet Baldwin.

American; medium, roundish, deep red striped on yellow, flesh sweet, dry; September, October. There are, we think, two apples grown under this name, as Thomas describes one as "nearly first rate," and ripening "early winter."

Tart Bough.

Resembles Early Harvest, but trees more rapid in growth, and ripens ten days later, more acid.

Transparent de Zurich.

Small or medium, beauty its only merit, waxen white, clear, translucent; September.

Thems Red Streak.

American; medium, round, pale green, red stripes, flesh sour, Winter. (Hov. Mag.)

Twenty Ounce Pippin.

Large, roundish, conical, green, poor, very distinct from Twenty Ounce, or Cayuga Red Streak.

Victuals and Drink.

Big Sweet, | Pompey.

American; large, oblong, rough, dull yellow, russet blush, sweet, dry; October, January.

Victorious Reinette.

Reinette Triomphante.

Foreign; large, roundish oblong, pale yellow, rough dots, flesh firm, sub-acid; December, January.

White Doctor.

Small, pyrimidal, greenish white, sweet, dry; September, October.

White Calville.

White Winter Calville, | American White Winter Calville,
Calville Blanche d'Hiver, | Niger.

Foreign; above medium, roundish flattened, whitish or greenish yellow, flesh white, negative; November, February.

White Astrachan.

Transparent de Moscovie, | Glace de Zélande.

Foreign; medium, roundish conical, white faint streak of red, flesh white, dry, poor; August.

Winter Cheese.

American; medium, greenish, with stripes of dull brownish red in sun, mealy, poor; December, January.

Willis Sweet?

Large, roundish, oblong conical, yellow, marbled with dull red, flesh white, sweet, cooking; October, November.

Wormsley Pippin.

Knight's Codlin.

Foreign; medium, roundish, greenish yellow, acid; October, November.

Winter Queen.

Winter Queening.

American; medium, conical, crimson and pale red, flesh yellowish, sub-acid; December.

Yellow Ingestrie.

Foreign; small, clear yellow, crisp, spicy, not valued; October.

Yorkshire Greening.

Foreign; large, roundish flattened, dull dark green, striped with dull red, flesh greenish white, acid; Winter.

Zane.

Zane Greening.

American; large, roundish, dull greenish yellow, poor; February to June.

Zieber.

American; small, roundish yellow, striped red cheek, flesh dry; "good."

THE BLACKBERRY.

Rubus Villosus.

A well known bramble, indigenous to this country. The fruit is so easily procured in its wild state, as not to have received due attention from cultivators.

Ripening, as it does, just as Raspberries are gone, when there is a dearth of the smaller fruits, it is surprising that exertions have not been made to grow improved varieties from seed. Plants selected from the wild state, placed in the garden, and well cultivated, have produced fruit of double the usual size and improved in flavor.

Seedlings may be grown in the same way as Raspberries, and the plant requires similar soil and culture.

There are, in its wild state, many varieties, but all answering the same botanical description. They are known under the common names of High Blackberry, Bush Blackberry, Low or Trailing Blackberry, &c.; the stems being tall and more or less branching. The fruit ripens from 20th July to 10th August, and is highly esteemed for making syrup, which is regarded valuable as a preventive as well as curative of diarrhœa, dysentery, &c. As a dessert fruit, and for cooking, when well grown and ripened, it is esteemed, and often advised by Physicians, on account of its healthful character.

There is a variety known as the White Blackberry, differing not in habit, but with shoots and fruit of a greenish white.

THE CHERRY.

Cerasus Sylvestris, and *C. vulgaris*, Arb. Brit. *Rosacea* of Botanists.

The Cherry, in its wild state, is a native of most parts of the United States, and also of Britain; but the cultivated variety is recorded as having been brought from Cerasus (whence the name), a city of Pontus, in Asia Minor, and planted in the gardens of Italy by the Roman General, Lucullus, after he had vanquished Mithridates, in the year 69, B. C.

In 1824, Rev. Dr. Robert Walsh made communication to the London Horticultural Society, stating the Cherry to be now growing in the land of its origin, whence it was brought near 2,000 years ago.

He describes two varieties. "The first of these varieties is a Cherry of enormous size, which grows along the northern coast of Asia Minor, from whence the original Cherry was brought to England. It is cultivated in gardens, always as a standard, and by a graft. The second variety is an amber colored transparent Cherry, of a delicious flavor. It grows in the woods, in the interior of Asia Minor, particularly on the banks of the Sakari, the ancient Sangarius. The trees attain gigantic size—the trunk of one measured in circumference five feet; height, to where the first branch issued, forty feet; summit of highest branch, ninety feet—and this immense tree loaded with fruit."

From Italy it was introduced into England as early as the forty-second year B. C., although some authorities date its introduction as late as fifty-five years after the Christian Era—that is, in the early part of the reign of Nero. The former date appears to be confirmed by Pliny, who says: "Italy was so well stocked that, in less than twenty-six years after, other lands had Cherries, even as far as Britain, beyond the Ocean." The poet, Lydgate, who wrote in or about 1415, says that Cherries were then exposed for sale in the streets of London, much as they are at the present day; and in a curious poem, entitled Lickpenny, is found the following allusion to them:

> "Hot pescodes one began to cry,
> Straberys rype and Cherreys in the ryse."

From England and Holland both seeds and trees were introduced into this country early after its first settlement.

"Pliny mentions eight kinds of Cherries as being cultivated in Italy when he wrote his Natural History, which was about 71, A. D.;" and from this date up to the present time, the varieties have been gradually increasing until we have now described, in various works, upwards of one hundred and fifty.

The disposition of Americans to combine the useful with the ornamental, has induced the planting (where the Cherry succeeds) of many as ornamental or shade trees; while examples of reward pecuniary, from sale of fruit on trees so planted, has probably been additional inducement. The symmetrical form and rapid growth of the Cherry fit it well for a street tree throughout the country, and we wish we could induce the following of example of our Connecticut forefathers in 1760, and recently renewed by Prof. J. P. Kirtland, of Cleveland, Ohio, who has planted the Cherry as a street tree upon the entire front of his grounds. Mr. Loudon, in his Arboretum, gives an account of long avenues of the Cherry in Germany; and more recent travelers have written repeatedly of and described them in such manner, that it is not a little strange our people, as a body, have not as yet seen and acted upon the plan to the advantage of their pecuniary as well as social interests. Says Mr. Loudon: "These avenues in Germany are planted by the desire of the respective Governments, not only for shading the traveler, but in order that the poor pedestrian may obtain refreshment on his journey. All persons are allowed to partake of the Cherries, on condition of not injuring the trees; but the main crop, when ripe, is gathered by the respective proprietors of the land on which it grows."

In our view, this practice, if extensive in this country, would render less of one crime in the summing up of her annals—i. e., the robbing of orchards; and possibly, a law like that enacted in the terrritory of Erfurth in 1795, would be beneficial. It provided that, in case of the robber not being discovered, the district in which the offence was committed should be obliged to make compensation for the damage sustained. This made every individual interested in preventing depredations on his neighbor's property.

Propagation.—The Cherry is propagated from seed—by budding—by grafting—and occasionally, by pieces of roots.

By Seed.—The seed of the black mazard is that generally used, and considered best for propagating the Heart and Duke varieties upon, while the Mahaleb is used only for the purpose of creating a dwarf habit. Seeds of the Graffion or Yellow Spanish will occasionally reproduce trees bearing fruit similar to the parent; while seeds of many of the cultivated kinds will not vegetate, there being no germ or seed bud within the stone. The seed should not be per-

mitted to get dry, but immediately when gathered, rubbed and washed clean of pulp, and mixed half and half with sand, placed in boxes of, say, four inches deep, having holes in the bottom for drainage, and then set in the open air, on the north side of a building, clear of direct sunlight. The ground should be well drained, and, if possible, fresh turf, and spaded or plowed in the fall one foot deep. As soon as the frost is out in the spring, rake down the ground level, mark out drills six inches wide and one inch deep, sow seed so that it will be about three inches apart, cover with the soil one inch, and add one inch of sand or leaf mould.

By Budding.—This is done as described on page 22; but in the Cherry, and especially when the buds are a little unripe, it is best in cutting the bud from the scion to take liberally of the wood, thereby preventing its drying as soon as otherwise. The season for budding the Cherry is, when the tree on which you are going to operate is forming its terminal bud, and varies in seasons, as also in the age of the trees; trees of four or five years old, in sections south of Cincinnati, being ready by middle of June, while plants transplanted the past spring will not be ready until early in July. North of this section line, the season will vary from two to four weeks later. Occasionally it will answer to bud in September, as it sometimes happens that a second growth is made about that time.

By Grafting.—This should be performed in all sections south of Cincinnati early in February, and for those north, from the last week in February to middle of March. Saddle grafting is best where both stock and scion are equal in size; whip or tongue grafting is best where the stock is not over half to three-fourths inch diameter; and cleft grafting, where large stocks are to be changed. This last is dangerous, inasmuch as it gives too great a check to the tree; it is better to graft the small limbs and branches. Side grafting is the mode most advisable for young beginners, and also where the work has been put off a little too late.

By Roots.—The root of the mazard Cherry, cut into pieces of about four to six inches long, and having the upper end set about one inch under ground early in spring, will often throw up strong shoots, and where a person is unable to get seedlings, this is the next best mode of obtaining stocks, as they are no more liable to sucker than if from seed.

Transplanting.—When, from the seed bed to the nursery row, it should be done in the fall on dry soils, and early in spring on soils not perfectly dry in winter. They should be set in rows four feet apart, and one foot apart in the row, and the plants should have one half of last year's growth cut off, and all long, straggling, as well as

the tap root, cut back to six inches. These, if the season is good, will be suitable for budding the same summer. Orchard trees, and also dwarfs for gardens, should have one half of the previous year's growth cut off, and the roots trimmed smoothly at ends with a sharp knife. The distance apart for standard trees in orchard, should be about twenty-five feet, while dwarfs may be planted at distances of eight feet each way.

Standard Trees.—Are best for orcharding, and should, in no situation, have their heads formed more than four feet from ground, and throughout the West and South, not more than two feet.

Dwarf Trees.—Are produced by propagating the Sweet or Duke varieties on the Mahaleb, or Morello roots. They should in all cases be worked just at the crown of the root, as it is there a union is best formed; and also, by means of pruning, (see page 30,) they should be made to form heads branching immediately from the ground.

Soil and Situation.—The soil best suited to most Cherries is that of a rich light loam on a gravelly sub-soil, but they will grow and produce fruit freely in all soil *not wet*. The roots of the mazard or sweet Cherries are very impatient of water, and will only endure a few seasons in strong soils void of drainage, or where water stands most of the winter. To this want of drainage in great measure, is attributable the destruction of the Cherry in most of the prairie soils throughout Southern and Western States; and not until we manage to drain freely our rich alluvial deposits, can we succeed perfectly with the Sweet Cherries. The roots of the Duke's, Morello's, and Mahaleb, are less open and spongy in texture, and, therefore, less impatient of water. They, however, do not flourish vigorously for any length of time, unless drainage is effected. To this point in the culture of the Cherry, we beg especially to call attention of our Western and Southern readers, assuring them that, whatever of theory may have been advanced referable to climate, they will find drainage, or the want thereof rather, to be the primary cause of destruction. Situated at a point where the Cherry probably does as well as at any place in the United States, we have had occasion to notice the result of trees situated in what appeared suitable soil, but where, on examining, after having lost several trees, we found water to have stood a long time about the roots.

Naturally, most of the soil of Western and Southern States, is rich in vegetable matter, giving vigorous, even rampant growth to the Cherry tree; which, added to the fact, that most trees have their roots standing in stagnant cold water, induces tendency to disease from the first. If, then, when about to plant Cherry trees, perfect drainage is made, so that no water will stand for twenty-four hours

together about the roots, an application, on prairie soils, of sulphur, and finely broken or ground bones be made, the ground work to success will be performed.

Situations sloping south will affect the producing of early bloom, rendering less chance of fruit from effect of late vernal frosts, and, also, render the tree more liable to second growth in the fall, and thus, unfit it for the severe changes of temperature throughout winter. Northern exposures are recommended, but, an eastern one we regard best. The forenoon sun may excite circulation, but not as rapidly as the mid-day, or from one to three o'clock, p. m.; while there is, also, more or less of moisture in a morning atmosphere, and none in the afternoon; the tree, also, has a chance to have its circulation gradually checked ere the cold of night, which it has not when planted on ground sloping south, west, or north. When planting on either of the last exposures, or on level land, let your *tree* slope to the south-west, as the sun has less effect upon it in that position.

Cultivation. In nursery rows, the earth, in spring, should be first turned away from the trees; in about ten days, it should again be stirred and left nearly level, and so kept throughout the growing season. In October, it should be turned up toward the trees. The plants budded last season, should be cut back to within six inches of the bud, as soon as the same commences to swell strongly. The buds, after having grown six to eight inches, should be tied up to the stocks, and, in June, the stock should be cut with a slope downward, close to the bud. The second year, they should be headed back to four feet, when some will throw out branches two feet from the ground; others, where headed back. The third year, they should be transplanted. Throughout the West, on the rich prairie soils, it has been found impolitic to hoe, or otherwise use any mode of culture toward keeping the ground clean, after August; it induces second growth, immature ripening of wood, and consequent injury in winter. Orchard and garden trees should be lightly spaded around in July, and a quantity of mulch, or stones, laid over the roots.

Pruning and Training. The Heart Cherry, as a standard, needs little pruning, except to cut away limbs liable to cross one another. This is best done in July, when the cut, if made smooth, and close to the body or large limb, will at once heal. If disposed to grow too rapidly, dig around a tree, of, say, four inches diameter, a circular trench, three feet distant from the body of the tree, and two feet deep, cutting off with a sharp spade, every root and fibre outside that space. And, for every inch diameter, up to a tree twelve inches through, add four inches distance of trench from tree. Often, the top of the tree will also require pruning, so as to give it a round head, as of an acorn, based on the circle of the trench.

The Dukes and Morellos need somewhat more pruning than the Heart varieties, but all are impatient of the knife; yet, if to be done, let it be in July, or when the terminal buds are forming.

Dwarfs are trained to please the fancy of growers, and mostly by the "pinching-in" process. And as they grow with extreme vigor on the Mahaleb, for three or four years, they require, not only to have their tops pruned, but also, to be root-pruned annually.

If possible to be avoided, large branches should never be cut from a sweet cherry tree. We have examined the results of many cases, when large branches were lopped in spring, for the purpose of changing the tree to a different variety, by grafting; the result has almost invariaby been death after two summers. When necessary to be done, the wound should be covered with grafting composition, or gum-shellac, to exclude the air, and the body wrapped in straw or matting. Encasing the body during the winter and spring months, with straw, cloth, or moss, will often prevent injury; for the cause of bursting of bark is in winter, not summer months, although it does not always exhibit itself until July or August. The atmospheric blight, injuring young shoots, acts, at once, in summer.

Insects and Diseases. The aphis, slug, caterpillar, and curculio, are more or less destructive to the cherry, but as they are described in other chapters we must refer the reader thereto. The diseases, according to writers, are, in the West, numerous; but, as they all centre in the bursting of bark and exudation of gum, we shall only note on that. Under the head of Soil, we have given what we term the primary cause of this disease, and, if added to what we have said under heads of Cultivation and Pruning, we believe will have effect to check, in great measure, the evil. That it will render the tree entirely free of the disease, we are not prepared to say; but, if to it be added selections of buds from healthy trees, and growth in nursery on ground well drained, and not over stimulated by barn-yard manures, we believe a change for the better will be the result.

Uses. The wood of the wild or Virginia Cherry is used by cabinet makers, being susceptible of a fine polish. The fruit of the Sweet Cherries is universally esteemed for the dessert, and that of the tender-fleshed, like Belle de Choisy, is regarded as wholesome. The Sour Cherries, either dried or fresh from the tree, are much esteemed for culinary use, while the Mazard and wild Virginian Cherries are used in flavoring liquors. "The celebrated German, *Kirschwasser*, is made by distilling the liquor of the common black Mazard; (in which the stones are ground and broken and fermented with the pulp;) and the delicious *Ratifiia* cordial of Grenoble, is also made from this fruit. *Mareschino*, the most celebrated liquor of Italy, is distilled from a small Mazard, with which, in ferment-

ing, honey and the leaves and kernels of the fruit are mixed. The gum of the cherry is nearly identical with gum-arabic, and there are some marvelous stories told of its nutritive properties."

Gathering the Fruit. The flavor and character of the cherry is best obtained when gathered early in the morning; but, if intended for distant market, they should always be gathered with the stem attached, and when dry.

Classification. In order the more readily to distinguish varieties of the cherry, authors have entered into classification; but as those heretofore made, have seemed rather to perpetuate error than induce correctness, we have ventured upon a partially new order. Lindley, in his Guide to the Orchard, makes two divisions; one embracing varieties, the fruit of which is round, acid or sub-acid; the other, sweet, and heart-shaped. Downing, in his Fruits and Fruit Trees, makes four divisions or classes, viz: Heart-shaped, Bigarreaus, Dukes, and Morellos; and, in a measure, all other writers have adopted these classifications. The two last terms of Mr. Downing, —Dukes and Morellos,—we shall continue, as they are not inapplicable, and the trees are distinct in growth. But the word Bigarreau, being derived from *Bigarrè*, originally meaning, and intended to convey the idea of a parti-colored, or yellow and red fruit, and *not* meaning, (as it is generally used and understood by pomologists) *firm-fleshed*, we can see no just cause for continuing in use. Again; there are varieties which, although round in form, are yet sweet, and partially tender-fleshed, and however erroneous, would have (if the old classification were pursued) to come under the head of Heart-shaped. There are, also, varieties where the characters, both of tree and fruit, of those determined by the two distinctions—Heart and Bigarreau—are so closely commingled, as to often perplex the amateur, and thus increase rather than lessen his troubles. We shall, therefore, designate in our text descriptive of each variety, the classes heretefore known as Hearts and Bigarreaus, being rapid growing, lofty and spreading trees, as *Sweet*, of which the old Black Heart may be taken as the type. The Dukes are mainly distinguished by the trees having narrower leaves than those of the Sweet Cherry, being upright in growth while young, but forming a low, spreading head, with wood less strong, and somewhat darker colored than the Sweet Cherries. Fruit, generally round, of one color, and when fully ripe, rich sub-acid.

The Morellos are less upright in growth thnn the Dukes. Branches, small, slender, drooping; foliage, narrow, dark green; fruit, acid.

Engravings. These have been made from medium sized specimens, taken direct from the tree, and placed in the engraver's

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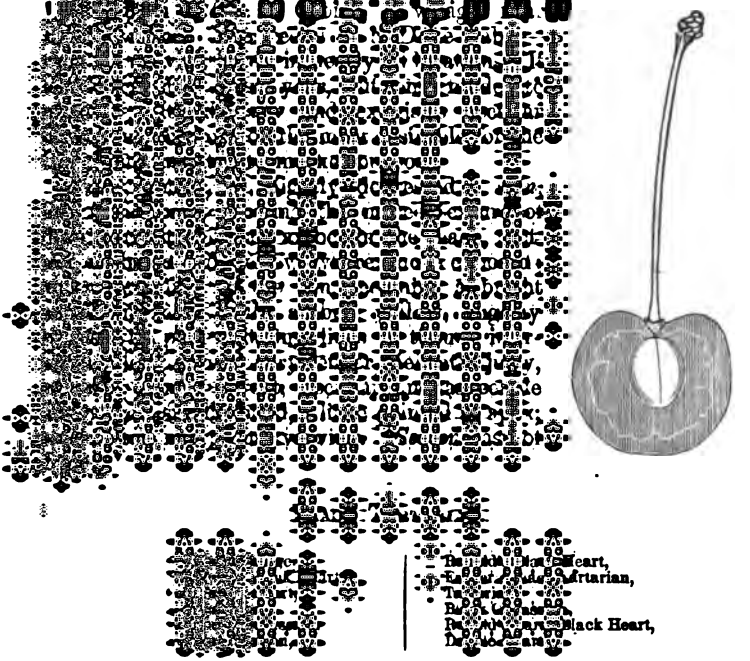

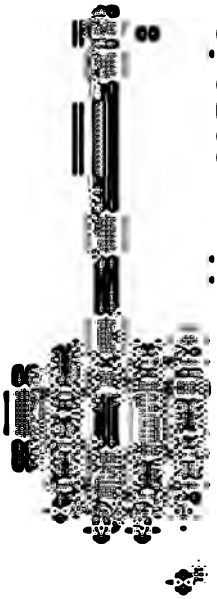

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WK.

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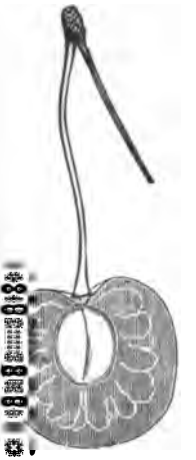

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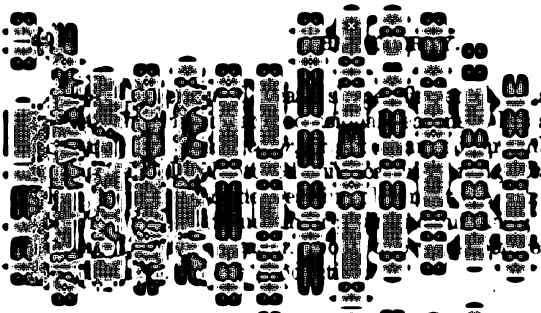

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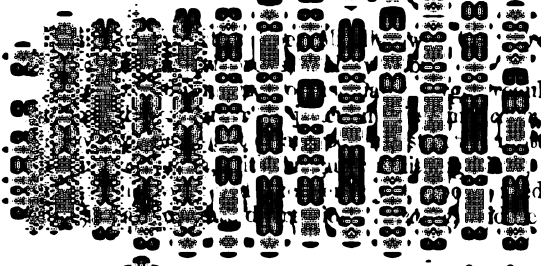

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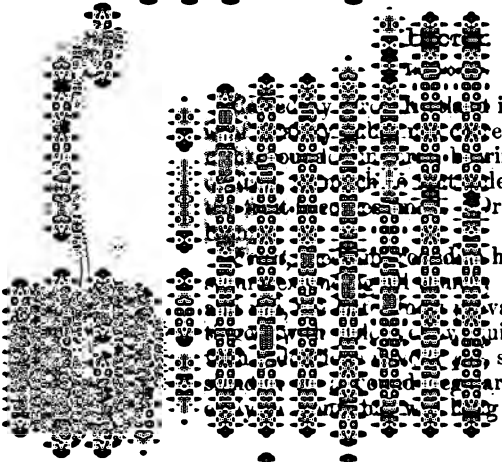

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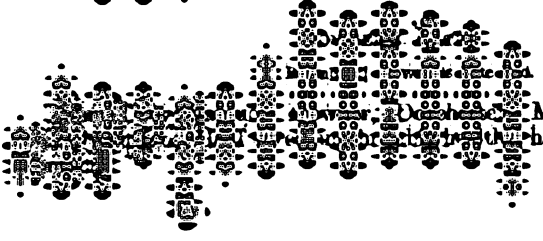

Mass., 1808. The
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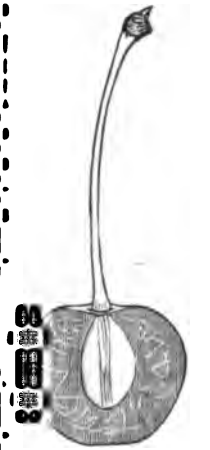

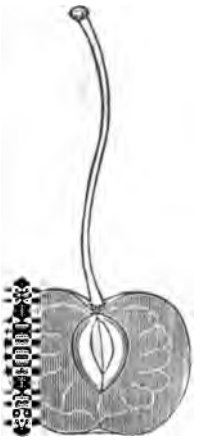

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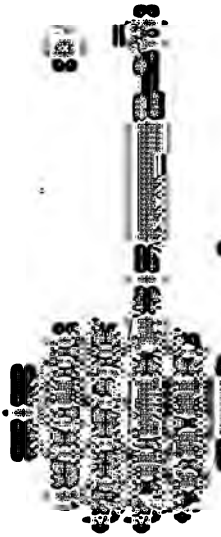

, 1842, and named
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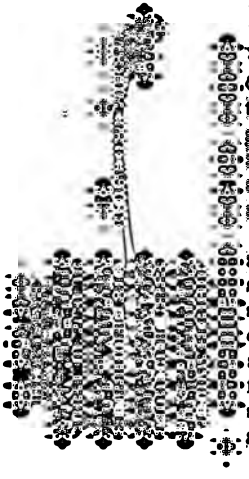


MMOTH.

from a pit of the
a tree remote from
given from the ex-
t, being one-eighth
ty. The tree is of
th very large leaves
vever, only moder-
igin, gravelly loam.
t size, often three
rence, obtuse, heart
low, partially over-
ich red; *flesh*, with
ad, ovate, reversed,
s, and with a very
dish oval, regular,
erally short, moder
of June.

Bigarreau,

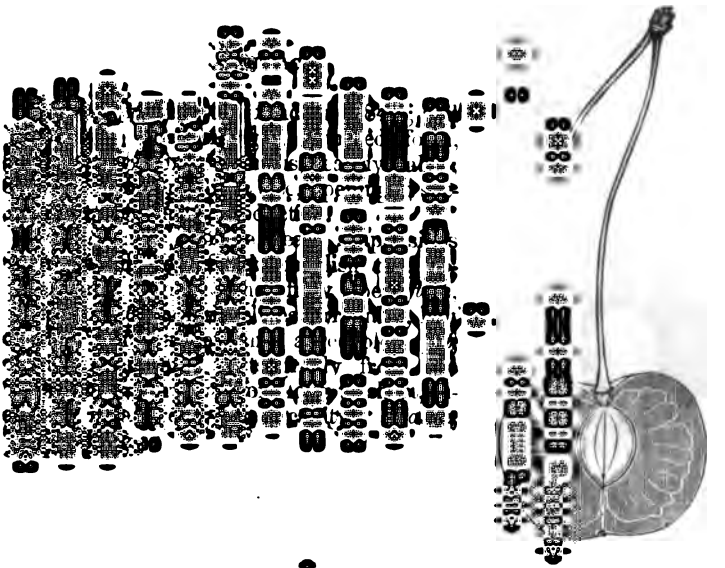
received from

d in 1842; soil a
y, healthy grower,
rately productive;
little liable to in-

obtuse, sometimes
shallow indenture
lack, when ripe;
lines almost white,
d rich flavor; *pit*,
varying in length
middle to last of

nd in 1842; soil
ading regular form,
ers, medium, open-
ession; a good, not

egular, heart shape,
half round; *color*,
g to black; *flesh*,
much so that the
obliterated, juicy,
m or small, ovate,
stout in a deep,
t of June and early
all collections.



tree, vigorous,

r compressed
ished ; *suture*,
lines obscure,
; *pit*, small,
to 15th July.
very best ; the
in size.

Tree, strong,
esembling the
is one of the
d, and feeling
ve distributed

of buds and grafts.
xtensively, and we
mending this, that
ne origin will be
e wants good cul-
rity is materially
ture, while its char-
Valuable, either
ens.
use heart shape,
neven, and always
projection on one
deep red, shaded
ber yellow, with
h, yellowish white,
ellow tinge around
ith a rich, delicious
d without ridges;
ngth—one, to one-
th to last of June.

r.

d in 1842. The
od in ground uncul-
ateness of ripening,
most desirable, and
e, as it is very pro
head similar to the
erect.
ng obtuse heart
t red, when grown
color, overspread
ellow russet patch,
flesh, with radiating
juicy, of good, not
e ripe, it is a little
, rather long and
erately deep basin.

n 1829; first de-
Shannon, once gov-

ernor of Ohio. The tree is very hardy, having been tested in many locations.

Fruit, slightly above medium size, globular, flattened at junction with stem, dark purplish red, when ripe; *flesh*, tender, reddish purple, juicy, acid; *pit*, small; *stem*, long, slender, inserted in an open cavity. *Season*, middle of July.

Tecumseh.

Raised by Prof. Kirtland in 1842, on a soil of gravelly loam. The tree is moderately vigorous, spreading, hardy, producing its blossoms late in the season.

Fruit, medium to large, obtuse heart shape, compressed, with a broad, shallow suture; *color*, when fully ripe, a reddish purple, or dark liver color, mottled somewhat with red; *flesh*, reddish purple, irregular, distinct radiating lines, half tender, very juicy, sweet, but not high flavor; *pit*, medium size, smooth, round, slightly elongated; *stem*, varying, set in an open, rather deep cavity. *Season*, middle to 20th July. Very valuable for a late market variety.

CLASS II.—*New and Untested—suited to Certain Localities, or Extensive Grounds of Amateur Pomologists.*

Arch Duke.

Griotte de Portugal,	Late Arch Duke,
Portugal Duke,	Late Duke.

An English variety, first described by Lindley, since figured and described in Hovey's Magazine, from which we extract. The May Duke, or Late Duke, have almost always been sold as this variety. It is a more vigorous grower, and distinguished in its fruit by being more heart shape. Fruit, large, heart shape, compressed; dark shining red; flesh, light red, slightly adhering to the stone, tender, sub-acid; stem, long, slender. Season, early in July.

American Heart.

Probably a native of this country; its origin is, however, uncertain. Tree, vigorous, spreading. Fruit, medium, heart shaped, four sides compressed; pale yellow and red; flesh, yellowish, watery toward the pit, juicy, sweet, second flavor; pit, medium; stem, long, moderately slender. Season, early in June.

Adam's Crown.

English; little known in this country. Fruit, medium, round, heart

shape; pale red; flesh, tender, juicy and agreeable. Season, middle of June.

Anne.

We have had this variety growing for two years, but have not fruited it. Chas. Dowling, Esq., writes us that it originated at Lexington, Ky., ripens early, is very productive, and of excellent flavor. The tree is of the Sweet Cherry class.

Burr's Seedling.

Originated in Western New York. Tree, vigorous, spreading, productive. Fruit, medium to large, heart shape; clear bright red on pale yellow; half tender, juicy, sweet; stem, slender. Season, middle to last of June.

D'Esperin.

Bigarreau D'Esperin.

New, from Belgium. Hovey says, the tree has a compact, spreading habit, of moderate growth, a good bearer. Fruit, large, roundish heart shape, depressed at ends, flattened on sides; suture, all round; color, clear, soft amber in the shade, mottled with pale red in the sun; flesh, pale amber, tender, juicy, excellent; pit, medium, oval; stem, long, slender. Season, early in July.

Belle of Orleans.

Belle de Orleans.

New, from France. Tree, vigorous grower, good bearer, promises to be valuable. Fruit, medium, roundish; light yellowish white, with clear pale red covering about one half the surface; flesh, tender, juicy, and delicious. Season, early in June.

Buttner's Yellow.

Buttner's Wach's-Knorpel Kirsche, | Buttner's Gelbe Knorpel Kirsche.

From Germany. Tree, vigorous, spreading; only as a novelty is it desirable. Fruit, medium, regular heart shape, flattened at stem end; pale lemon yellow, with russet marblings; flesh, whitish yellow, firm, even tough, without flavor, adheres to the pit; stem, medium length and size, in an open, round, regular cavity. Season, middle to last July.

Black Eagle.

English, raised by the daughter of Mr. Knight. Tree, healthy, strong grower, unproductive at the West. Fruit, above medium, borne in threes, obtuse heart shape; deep purple, almost black; flesh, reddish purple, half tender, with a rich, sweet, high flavor. Season, early in July.

Buttner's Black Heart.

Buttner's Herz Kirsche, | Schwarze Neue Herz Kirsche.

From Germany. As a late variety, firm fleshed, for market this promises well. Fruit, large, heart shape purplish black when fully ripe;

flesh, reddish violet, firm, juicy, good, not high flavor. Season, middle to last of July. Tree, productive, a vigorous grower.

Downing's Red Cheek.

Raised by Chas. Downing, Newburgh, N. Y. Tree, vigorous, half spreading. Fruit, medium to large, obtuse heart shape; yellowish white, with a rich dark crimson, covering more than one half the fruit; flesh, yellowish, half tender, delicately sweet; pit, medium; stem, set in an even hollow of moderate depth. Season, middle to last June.

Champagne.

Raised by Chas. Downing, Newburgh, N. Y. This variety is highly commended by the late A. J. Downing, but we have been unable to fruit it sufficiently to place it among those of general cultivation. For large orchards, we think it desirable as a bearer, but not of size to command price in market. Tree, vigorous, healthy, productive. Fruit, medium, roundish heart shape, slightly angular; color, shades of lively red; flesh, amber color, juicy, sprightly, rich flavor; stem, moderate length, in a shallow cavity. Season, middle of June, but hangs well into July.

Cumberland.

Triomphe, of Cumberland, | Brenneman's May,
Monstrous May, | Steret's May,
Cumberland Seedling.

This is claimed to be a seedling of Cumberland Co., Pa. Having fruited it from two sources, one proving identical with Yellow Spanish, and the other identical with Tradescant's Black, we have some doubts as to its being a seedling or new variety. In the *ad-interim* report of the Pennsylvania Hort. Society, it is thus described: Large, obtuse heart-shaped, sometimes roundish, compressed at the sides; deep crimson, almost purple when fully ripe; suture, indistinct; stem, rather long, slender, inserted in a broad, open cavity; apex, slightly depressed; stone, roundish oval, compressed; flesh, rather solid, red, slightly adherent to the stone; flavor, fine; quality, "best;" period of maturity about the middle of June.

China Bigarreau.

Chinese Heart.

Raised by William Prince, Flushing. Tree, hardy, healthy, spreading. Fruit, medium, roundish heart shape; bright amber yellow, becoming mostly red when fully ripe; flesh, half tender, juicy and rich, but, unless perfectly ripe, slightly bitter; stem, long and slender; very productive.

Carnation.

Wax Cherry, | Cerise Nouvelle d'Angleterre,
Crown, | Grosse Cerise Rouge Pale,
Cerise de Portugal, | Griottier Rouge Pale,
Griotte de Villennes.

A variety of the Morello, that from its hardiness has been pretty largely disseminated through our Western and Southwestern States. Fruit, above medium; yellowish white, becoming, when fully ripe, a lively red

v ripe, less acid than
t of July, but will
wood, and a profuse

y, spreading; very
mpressed on sides,
ved by a line of car-
bright lively car-
e; pit, small; stem,

ee, much resembles
althy, hardy, vigor-
to become valuable

d oblong; one side
le amber, mottled
fully exposed to the
slightly tinged with
very tender, juicy,
edium, oblong oval.

onestoga Township,
nia. Fruit, very large,
ndented at the apex;
h and three-quarters
nder, inserted in an
firm; flavor, sugary,
best." (W. D. B.)

esembling, in charac-
ted it, we only note
borne in clusters, of a

y prolific. Fruit, of
aluable for cooking.

lder, of Boston,

icy, half tender,
ne. Promises to

lar round head;

llow; flesh, yel-
medium; stem,
e.

1823. Original
ery prolific.
les; color, rich
d with red, half
n, medium; set

t been unable to
vigorous strong
roductive.

Fruit, medium size, roundish heart-shape, very regular, borne in threes; color, delicate amber, beautifully mottled with pale red; flesh, whitish yellow, half tender, delicate, juicy, and very sweet; pit, medium; stem, long. Season, middle to last of June.

Florence.

Knevett's Late Bigarreau.

From Florence, in Italy. The tree is of stocky strong growth, spreading, unproductive while young, becoming more productive as it grows old. Fruit, large, roundish heart-shape, flattened at base; pale amber, mottled or mostly covered with bright red; flesh, amber color, firm, rich, sweet, fine flavor; pit, small, roundish oval; stem, inserted in a broad basin. Season, middle July.

Guigne Noir Luisante,

Black Spanish,

Or bright black red, is a cherry of the Duke or near Morello class. Tree, erect in habit, healthy, hardy, forming a pretty round head, regular moderate bearer. In 1823, it was cultivated in New Jersey, as Black Spanish, and under that name brought to Ohio. Fruit, of medium size, heart-shape, globular; glossy blackish red; flesh, reddish purple, tender, juicy, rich acid; pit, round; stem, medium. Season, middle to last July.

Graffion.

Bigarreau,
Yellow Spanish,
Fellow's Seedling,
White Bigarreau?
Amber or Imperial,
Turkey Bigarreau?
Bigarreau Royal,

Italian Heart,
Bigarreau Gros?
West's White Heart,
Figarreau Tardif,
Groote Princess,
Hollandische Grosse,
Prinzessin Kirsche,

Corise Ambrée.

The Graffion, or Yellow Spanish as it is generally known throughout the states, is truly one of the richest and best cherries, but its tendency to decay just as it is on the point of ripening, makes it unprofitable. The tree is of strong spreading, healthy habit, and productive.

Fruit, large, regular obtuse heart-shape; whitish yellow, mottled and mostly overspread in the sun, with bright red; flesh, yellowish, firm, juicy, rich, sweet, delicious; pit, small, round ovate; stem, stout, in an open basin. Season, early July.

Holland.

Bigarreau d'Hollande,
Spotted Bigarreau,

Armstrong's Bigarreau,
Turkey Bigarreau?

Holland Bigarreau.

Mr. Downing, in his work on Fruits, says this variety was first imported to this country from France. In the *Jardin Fruitier* it is stated to have been originally received from Holland. Mr. Thompson of the Lon-

on. We have
ing prove to be
Mr. Downing's
or pale yellow
carmine red;
clusters; flesh
eet and excel-

rming a pyram-
point at apex;
nt red; stem,
ly adhering to

; very produc-
hape, elongated,
h, tender, juicy,
pointed. Sea-

as yet not all tested. h acid, good flavor;

culture and sheltered ee of second class in productive. Fruit, ad, open suture half red, becoming nearly h, sweet; pit, medi- ast of June.

nd named by ourself, orticulturist in the)., of Northfield, Ill. ing, very productive. , compressed; suture, mber yellow, mottled ich bright clear glossy , firm, juicy, rich and ze, smooth and regu- with bold surrounding 16 July. As a market ze and beauty of this when known.

s grower, forming a ish black; flesh, half chief value, a market July.

erry, marvelous only ember. Tree, vigor-

Mary.

Raised by B. B. Kirtland, Greenbush, N. Y., and noted in the Horticulturist as similar to Christiana.

Manning's Mottled.

Mottled Bigarreau.

Raised by Mr. Manning, Salem, Mass. Tree, vigorous, spreading, very productive. Fruit, large, roundish heart shape; suture, half round, distinct line opposite; amber color, mottled and overspread with red; flesh, yellowish white, half tender, juicy, sweet, deficient in flavor; pit, large, oval, lays in a hollow separated on all sides but one from the flesh; stem, in a broad hollow. Season, last of June.

Madison.

Madison Bigarreau.

Raised by Mr. Manning. Tree, healthy, moderate grower, tolerably productive. Fruit, medium; color, red, marbled on light yellow; flesh, half tender, juicy, sprightly very agreeable; pit, small, oval; stem, slender. Season, last June.

May Duke.

Early Duke,
Large May Duke,
Morris Duke,
Morris' Early Duke,
Benham's Fine Early Duke,
Thompson's Duke,
Portugal Duke,
Buchanan's Early Duke,
Millett's Late Heart Duke,
Royal Hative,
Cerise Guigne,
Coularde,
De Holland,
D'Espagne.

From France. Tree, hardy, upright growth. It produces freely, but ripens so irregularly that we have entirely discarded it: from young trees one can rarely gather a pint of ripe fruit at any one time. The Holman's Duke, Jeffrey's Duke, Late Duke of most gardens, Royal Duke, and Lemercier, a new vaiety from France, are all so similar to May Duke that one description will suit all. They are only sub-varieties, and the Late Duke probably obtained by propagating from late ripening branches of May Duke. Fruit, roundish obtuse heart shape; red at first, becoming, when fully ripe, a dark purplish red; flesh, reddish, tender, juicy, sub-acid. Season, last of May to last of June.

Lindley.

Raised by Prof. Kirtland from seeds given him by Mr. M. Lindley, of Euclid, O. Tree, vigorous, moderately prolific. Fruit, large, heart shape, surface uneven; dark purplish red; flesh, almost firm, tinged with red, juicy, but deficient in richness of flavor. Season, first of July.

Leather Stocking.

Raised by Prof. Kirtland in 1842; gravelly soil. Tree, vigorous, hardy, moderately productive. Fruit, medium to large, heart shape, often ob-

tuse; color, faint dull red, becoming, when fully ripe, rich reddish black; flesh, very firm, tinged with red, sweet, good flavor; pit, medium; stem, in an open, but deep basin. Season, middle to last of July. As a variety to transport long distances to market this will prove valuable.

Napoleon.

Napoleon Bigarreau, Bigarreau Lauermann, | Lauermann's Kirsche, Clarke's Bigarreau.

From Holland. Tree, erect, vigorous grower; productive. The best sweet cherry for cooking purposes, and, on account of its showy appearance, always sells well in market. It is, however, liable to decay on the tree before fully ripe. Fruit, large, heart shape, inclining to oblong; bright delicate yellow, with shades of rich red marbled and spotted over nearly two-thirds surface; flesh pale yellow, very firm, moderately juicy, and, unless perfectly ripe, a little bitter; pit, medium, oblong; stem, stout, set in a narrow basin. Season, last of June.

Ohio Beauty.

Raised by Prof. Kirtland in 1842, and described by us in 1847; shortly after which, the original tree was destroyed, and since that we have not seen the fruit. We had, however, previously sent out buds and grafts and have often heard of its success. Fruit, large, obtuse heart shape; dark red on pale red ground, somewhat marbled; flesh, white, tender, delicate, juicy, with a fine flavor; pit, small, oval; stalk, long, set in a deep, open basin. Season, middle of June.

Proudfoot.

Proudfoot's Seedling.

Raised by D. Proudfoot, Cleveland, O. Soil, sandy. Tree, vigorous, round, spreading head; moderatively productive. This promises to become valuable on account of large size and lateness in ripening, often, even on warm, sandy soil, (and sheltered in a city garden,) holding its fruit until the 20th July. Fruit, large, heart shape, flattened at base; color, when fully ripe dark purplish red; flesh, yellowish, firm, juicy, sweet; pit, large; stem, set in a shallow, open cavity. Season, 15th to last July.

President.

Raised by Prof. Kirtland, 1842. Tree, vigorous, spreading. Fruit, large; dark red slightly mottled; suture, all round, deep, distinct; flesh, yellowish white, half tender, juicy, sweet; pit, medium; stem, short, slender. Season, middle to last of June.

Richardson.

Large, heart shaped, rather short, and tapering to the point; dark red, inclining to black; stem, short, slender; flesh, deep red, half tender, juicy saccharine, rich, luscious flavor. Last of June and first of July. It keeps well on or off the tree. Good grower and bearer, rather upright, hardy

in tree and fruit. Original tree, as far as known, in the garden of J. R. Richardson, Esq., Boston. (Cole.)

Roberts' Red Heart.

Raised by David Roberts, Salem, Mass. Tree, moderate, healthy grower; productive. Fruit, medium, roundish heart shape; pale amber ground, nearly overspread and mottled with red; suture, distinct; flesh, white, juicy, sweet, tender, and well flavored; pit, medium; stem, long, slender. Season, last of June.

Elkhorn.

Tradescant's Black Heart,
Large Black Bigarreau,
Bigarreau Noir Tardive,
Bigarreau Gros Noir,
Guigne Noir Tardive,
Grosse Schwarze Knoorpel.

This is probably an old variety from Europe, but as it was first made known in this country and distributed under name of Elkhorn, we have preferred following that to copying from the London Hort. Society. Trees, very vigorous, with broad leaf and bark of peculiar gray color, producing fine large fruit while young, but as they grow older, unless very highly cultivated, the fruit diminishes to near the size of the old Black Heart. Its period of late ripening has heretofore kept it favorably before horticulturists, but we now think it must give way to later and better varieties. Fruit, large, heart shape, uneven surface; purplish black; flesh, firm, purple, moderately juicy; pit, large; stem, short. Season, middle July.

Vail's August Duke.

Raised by Henry Vail, Troy, N. Y. We have not fruited it, but copy from the Horticulturist. Tree, hardy, healthy, moderate grower. Fruit, above medium, borne in pairs, obtuse heart shape; rich bright red in the shade, a lively cornelian in the sun; flesh, tender, sub-acid; pit, oval; stem, thick, when it joins the fruit, set in a deep narrow cavity. Season, middle to last of August.

Wendell's Mottled.

Wendell's Mottled Bigarreau.

Raised by Herman Wendell, M.D., Albany, N. Y. Tree, upright thrifty growth, early and prolific bearer. This variety has proved highly valuable during the few years it has been before the public; as yet it has not fruited at the West. Fruit, large, obtuse heart shape; dark purplish red; flesh, firm, juicy, well flavored; pit, small; stem, set in a round, regular basin. Season, first to middle of July.

Waterloo.

We have never been able to obtain this variety to meet the description given by Downing in his Fruits and Fruit Trees. At the last Pomological Congress, Hon. M. P. Wilder stated it to be synonymous with Monstreuse de Mezel. This we conclude must be error, either in the

variety grown by Mr. Wilder, or in description given by Mr. Downing. We copy the latter's description; "Fruit, large; obtuse heart shape; dark purplish, becoming black at maturity; stalk, long and slender; flesh, purplish red, juicy, tender, when fully ripe, with a rich, sweet flavor. Begining of July."

Werder's Early Black.

Werdersche Frahe Schwarze Herzkirsche.

This variety is, as yet, comparatively new in this country. It is somewhat doubtful whether it will ever deserve more than a trial. Fruit, medium; roundish heart shape; surface, slightly uneven; dark purplish red, becoming nearly black; flesh, purplish, tender, juicy, rich, sweet; pit, small; stem, medium. Season, middle of June.

CLASS III.—*Unworthy farther Culture.*

American Amber.

Bloodgood's Amber, | Bloodgood's Honey,
Bloodgood's New Honey.

American; fruit medium, roundish heart shape, amber and bright red, flesh tender, juicy, variable; pit large, stem long slender. Season, last June.

Amber Gean.

Gean Amber.

Fruit small, oval heart shape, pale yellow and red, flesh white, juicy, sweet, often bitter or mazardy, stem long, slender. Season, early July.

Belle de Sceaux.

Chatenay.

A Morello from France; fruit round, deep red, flesh yellowish, juicy, acid. Season, June.

Brown's Seedling.

American; fruit medium, yellow and red, sweet, half tender, wanting in flavor.

Bauman's May.

Bigarreau de Mai, | Wilder's Bigarreau de Mai.

From France; fruit small, dark red, oval heart shape, flesh purplish, tender, sweet. Season, last of May or early in June.

Black Heart.

Early Black, | Ansell's Fine Black,
Black Russian, | Spanish Black Heart,
Guigne Grosse Noir, | Guinier a fruit Noir.

An old variety hardy and productive, but at this day surpassed by many; fruit above medium, heart shaped, dark, nearly black color, flesh almost tender, juicy, sweet. Season, last of June.

Black Mazard.

Mazard, | Common English,
Wild English Cherry, | Black Honey,
Bristol Cherry.

This is the wild species of Europe from which many of our sweet cherries have sprung. It is now found in nearly every village or cultivated region of the States, and is valuable mainly for its seed for growing stocks on which to bud. There are numerous varieties, as all are grown from seed; some are red, some black, and some nearly white, all more or less bitter. Fruit small, oval heart shape, flesh tender, juicy. Season, middle to last July.

Black Bigarreau.

Bigarreau Noir.

Fruit middle size, heart shape, nearly black, flesh firm, sweet, dry. Season, July.

Bleeding Heart.

Gascoigne's Heart, | Red Heart,
Herefordshire Heart, | Guigne Rouge Hative.

Fruit medium, long pointed, heart shape, dark red mottled, flesh half tender, sweetish. Last of June.

Buttner's October.

Buttner's October Morello, | Du Nord Nouvelle,
Du Nord, | De Prusse.

A Morello, of medium size, dark red, roundish, of no value except as hanging long on the tree.

Boreatton.

Small, roundish heart shape, nearly black, flesh half tender, sweet, poor flavor. Middle July.

Cerise de Xavier.

A Morello, medium, dark red, round, acid.

Corone.

Couronne, | Corvun,
Herefordshire Black, | Black Orleans,
Large Wild Black.

Fruit small, roundish heart shape, dull black, flesh tender, mazardy. Middle July.

Coe's Late Carnation.

Fruit medium, roundish, red, acid, only for cooking.

Cluster.

Cerise a Boquet, | Chevreuse,
Boquet Amarelle.

Fruit small, borne in clusters, round, lively red, acid. Last of June.

Chinese Double Flowering.

Yung To, | Cerasus Serrulata,
Serrulated leaved Cherry.

A tree of dwarf habit, valuable only as ornamental.

Corwin.

A Morello, medium size, roundish, red, flesh tender, acid, pit large. Season, July.

Clarke's Superb.

Clarke's Bigarreau ?

Fruit medium, roundish heart shape, bright red with a dark maroon colored stripe half round, flesh whitish, half tender, mingling of sweet and bitter. Season, early July.

De Spa.

A Morello, medium size, dark red, acid.

Dwarf Double Flowering.

Double Flowering Kentish, | Cerisier a fleurs doubles.

A variety of the Kentish or sour cherry with semi-double flowers ; a pretty ornamental shrub tree.

Davenport.

Davenport's Early, | Davenport's Early Black.

Tree tender, fruit medium, heart shape, dark purplish black, flesh tender, juicy, sweet. Season, last of June.

White Heart.

Early White Heart, | Arden's Early White Heart,
Arden's heart, | Dredge's Early White Heart,
White Transparent, | Amber Heart,
Bowyer's Early Heat, | Herefordshire White,
River's Early Amber, | Sweedish,
Sweedish Red Heart.

An old variety and generally known throughout the States. It is a variable and uncertain bearer, and does not ripen sufficiently early to compete with many new vareties. Fruit medium, or a little below, heart shape, whitish yellow, often nearly covered with pale red, flesh half tender, juicy, sweet. Season, middle June. The Early Red and Yellow of Manning is very similar.

Early May.

Cerise Indulle, | May Cherry,
Small May, | Precoce.

A Morello, with small fruit, round, slightly flattened, lively light red, flesh tender, juicy, acid.

Flemish.

Montmorency, | Kentish,
Cerise a Courte Queue, | Montmorency a Gros Fruit,
Gros Gobet.

Fruit large, round, flattened at both ends, bright lively red, flesh yellowish white, juicy, sub-acid, stem stout, short, fruit borne in pairs. Last of July.

Gridley.

Apple Cherry, | Maccarty.

American; fruit small, roundish, color almost black, flesh firm, purplish, moderately juicy. Season, early July.

Honey.

Sparhawk, | Cream,
Large Honey, | Yellow Honey,
Late Honey, | Meresier a fruit blanc,
Sparahawk's Honey.

Little better than a mazard; small, roundish oval, yellow and red, flesh tender, sweet. Middle July. Pit large. Sumner's Honey of Cole is very similar and probably identical with this.

Hyde's Red Heart.

Hyde's Seedling.

Fruit medium, heart shape, red on yellow, flesh whitish, sweet mazardy. Early July.

Hyde's Late Black.

Fruit medium, roundish obtuse heart shape, purplish black, flesh half tender, juicy, sweet. Early July.

Kentish.

Late Kentish, | Common Red,
Pie Cherry, | Common Sour Cherry,
Kentish Red.

This is probably a seedling of this country, which is found every where that man has cleared the forest. Throughout the West, it appears as though it had been among the household goods brought by first settlers, and that wherever planted it has grown, and by suckers, increased "seventy fold." It is hardy and fruits abundantly, and many think it indispensable, but not after having grown and fruited the Early Richmond. Fruit medium size, round, lively red, tender, juicy, acid. Middle to last July.

Knight's Late Black.

Medium to large, roundish heart shape, flesh half tender, sweet, dry. Season, middle July.

Lady Southampton's Yellow.

Lady Southampton's Duke, Yellow or Golden, | Lady Southampton's Golden Drop, Spanish or Yellow.

Fruit small, heart shape, yellow, flesh firm, dry. Middle July.

Large Double Flowering.

A beautiful ornamental tree, with large showy double white flowers, like little roses, without fruit and therefore placed here, as unworthy cultivation on account of fruit. As an ornamental tree, it is beautiful when in flower

Lundie Gean.

Fruit medium, roundish elongated, dark purplish black, flesh tender, juicy sub-acid harsh. July.

Louis Phillip.

Morello from France; fruit medium, roundish, dark red, flesh red, juicy, tender, acid. Middle July.

Manning's Late Black.

Manning's Late Black Heart.

Fruit medium size, heart shape, dark purplish black, flesh purple, half tender, sweet, pit large. Season, early July.

Manning's Early Black.

Fruit medium, heart shape, purplish black, flesh tender, sweet, good. Middle June.

Morello.

English Morello, Dutch Morello, | Large Morello, Late Morello, Ronald's Large Morello.

The true English Morello is rare in this country, nor do we see any reason for introducing it, as seedlings may be raised from the common Morello equaling, if not often surpassing, the one so favorably described by most writers In growth, it varies from our common Morello only in the branches being more strong and upright, while the fruit is one third larger. Fruit medium or above, round, dark red or purplish black, flesh purplish red, tender, juicy, sub-acid. Season, middle to last July.

Ox Heart.

Lion's Heart, | Bullock's Heart, Very Large Heart.

Fruit above medium to large, obtuse heart shape, dark red, nearly black, flesh red, half tender, sweet. Season, early July.

Ostheim.

Ostheimer Weichsel.

A Morello, fruit below medium, round, dark red, tender, acid. Middle July.

Prince's Duke.

Like carnation, but poor bearer.

Plumstone Morello.

Fruit large, roundish, deep red, flesh tender, juicy, agreeable acid. Last of July. Its very large pit renders it unworthy, as compared with Shannon.

Pink Heart.

A small mazard, of pinkish red, oval, stem short. July.

Red Bigarreau.

Large Red Bigarreau, | Gros Bigarreau Rouge,
Bigarreau a Gros Fruit Rouge.

Fruit very large, oblong heart shape, irregular, color yellow or red, becoming dark red in sun, flesh yellowish stained with red, firm, sweet. Early July. Poor bearer.

Remington

Remington White Heart, | Remington Heart.

Fruit small, heart shape, yellow, flesh dry, bitter, sweet. Middle of August.

Rumsey's Late Morello.

This variety matures its fruit late, but we have been unable to find qualities in it worthy of extensive or even moderate growing; the pit is too large, and the tree a miserable grower. Fruit medium, roundish heart shape, lively red, juicy, acid. August.

Tobacco Leaved.

Four to the Pound.

Fruit small, round, red, firm dry flesh, large pit.

Transparent Guigne.

Transparent Gean, | Transparent.

Fruit small, oval heart shape, yellowish white shaded with red, flesh translucent, tender, melting sweet, a little bitter. Early July.

Sweet Montmorency.

Allen's Sweet Montmorency.

Fruit medium or small, round, amber and light red, mottled, flesh yellowish, tender, sweet. Middle to last July.

Virginian Wild Cherry.

This native cherry is valuable as a beautiful shade tree, and its fruit for flavoring liquors, but is not worthy a place in garden or orchard. It is too well known to need description, being the *Cerasus Serotina* of Torrey and Grey, while the Choke Cherry, as it is commonly known, is the *Cerasus Virginiana*.

Virginia May Duke.

A variety of mazard.

White Tartarian.

Fraser's White Tartarian, | Fraser's White Transparent,
Amber a petit fruit.

Fruit small, obtuse heart shape, reddish cream color, flesh whitish yellow, half tender, sweet.

White Bigarreau.

White Ox Heart, | Large White Bigarreau,
Ox Heart, | Harrison Heart,
Turkey Bigarreau.

Fruit large, heart shaped, yellowish with red in the sun, flesh almost firm, sweet, delicious, poor bearer. Last of June.

Weeping, or all Saints.

Ever Flowering Cherry, | Cerise Tardive,
Cerisier Pleurant, | Cerise de St. Martin.

Fruit of no value; as an ornamental tree, its peculiar weeping habit makes it very desirable.

Warren's Transparent.

Small, roundish heart shape, pale yellow and red, tender, sweet. Middle July. (Cole.)

Wilkinson.

Fruit medium size, nearly black, half tender, juicy, sweet. Middle July.

Wellington.

Fruit medium size, obtuse heart shape, black, almost firm fleshed, dry, sweet. Early July.

THE CURRANT

Ribes rubrum, Lin. *Grossulariæ* of Botanists.

The Currant of our gardens is from the north of Britain. The native varieties of our country are valueless. Of easy growth, producing abundance of fruit, even in the most neglected positions, it has found its way into every garden, and is the first fruit shrub planted by all new settlers. Had attention, commensurate with its merits, ever been given to reproduction of varieties from seed, we have no doubt the size might ere this have been increased, equaling that of the Kentish Cherry.

The Cherry Currant, a variety of comparative new introduction, by cultivation in rich soil, comes nearest in size to what might be expected, and what we hope in few years to see realized. To the Dutch horticulturists belongs the credit of first reproducing from seed, and improving the currant; and not until the latter period of the life time of Thomas Andrew Knight, Esq., did English horticulturists give it any attention. Mr. Knight originated several new kinds, varying, however, so slightly from the old Dutch Red as to be hardly worth retaining as distinct varieties.

Propagation.—Where intention is to produce new and improved varieties, seed should be selected from plants permitted to produce but little fruit, in order to perfect and increase the vigor of seed. When ripe, the fruit should be crushed sufficient to wash the seeds clean, when they may be wrapped in paper and laid aside until early in following spring, when they should be sown in light, rich soil, and covered about half an inch deep; or, they may be at once sown in a cold frame or border with northern exposure, and, on approach of winter, have two inches deep of tan bark or leaf mould scattered among the plants.

The continuance of varieties by means of cuttings is performed in similar manner, and at same time as directed under head of Gooseberries.

Transplanting.—This is best done in October, or *early* in spring; but may be done at almost any season except July or August, as the currant is so tenacious of life that failures to grow rarely occur. The distance apart of plants should be not less than four feet each way.

Soil and Situation.—The currant will grow in almost any soil, producing fruit abundantly, but it is only when grown in rich, deep soil, under high culture, that varieties exhibit their peculiar charac-

ters. We have grown the Cherry Currant in a poor, gravelly soil, and on a rich loam, and could hardly recognize the fruit as the same: the first, being only of medium size and indifferent character; while in the second, they were large, as described, and possessing the sharp acid characteristic of the variety. The situation should be free from shade of trees, but if shaded by hedge or fence, so as to give the morning and evening and not the noonday sun, the fruit will ripen and hang on much later, serving, by means of a few plants so placed in each garden, to continue the currant season from July to September.

Culture.—**The soil should be well enriched with rotted barn-yard manure every fall; this should be spaded or forked in lightly, and, during the fruit season, the ground should be kept clean of weeds.**

Pruning.—This should be pursued much as is described under head of Gooseberries, except that the suckers, or a portion of them, should be permitted to grow; while wood of three years old should be regularly cut out. Where new shoots springing from the root are not permitted to grow, but plants kept as miniature trees, it will be necessary to furnish plants every four or five years; and as the best and largest fruit is borne upon wood of the preceding year's growth, it is always best to retain as much of that as possible, compatible with form and habit of the plant; which should present, when fairly grown, or at three years from setting, a bush of pyramidal shape, three to five feet high, and about two to three in diameter.

The Currant, as well as Gooseberry, may both be trained as Espaliers, or otherwise, to suit the fancy or particular situations; producing freely of fruit in all positions, and of good quality when well supplied with food.

Insects.—The Currant Borer (*Ægeria tipuliformis*) is the only destructive insect which attacks the currant, and this is seldom met with in the West, or in gardens where the three years' old wood is regularly cut away, thereby giving vigor to the remainder of the plant. This insect is produced from a blue black moth, appearing about the middle of June, and depositing its eggs near the lower buds; these hatch, and the young borer enters the stem to the pith, which it devours. The best remedy is to cut off and *burn* all branches affected.

The Abraxas (?) Riberaria is said to destroy the foliage of the Currant and Gooseberry, and prevent the perfection of fruit. We have not seen the insect at the West. It is fully described in the N. Y. State Ag. Transactions for 1847, pages 461 to 469, by Asa Fitch, M.D.

Uses.—Familiar to e very one are the uses of the currant; green it is made into pies, and bottled for similar use in winter, by gather-

ing when of full size, or just before they commence turning red; have them dry, put them in glass bottles, cork and seal tight, and pack in sand in a cool cellar.

Currant jelly, made when the fruit is fully ripe, is considered by many persons an indispensable accompaniment to many dishes. Currant shrub and currant wine are also made from the ripe fruit, numerous receipes for which are in all the Horticultural journals. The fruit of the black currant made into a jelly is regarded by many invaluable as a remedy for sore throat, quinsy, &c.

Varieties.—Of the varieties there are but few truly worthy of cultivation. The Ribes *rubrum* or common red currant, is distinct in leaf and habit from the Ribes *nigrum*, or Black Currant. The Ribes *aureum* has ever been considered only as ornamental, and cultivated only for that purpose. Nor do we think the variety with prefix "large fruited" any more deserving attention of fruit-growers. The Ribes *sanguineum*, with its clusters of crimson flowers, is a pretty ornamental shrub, deserving place only in large grounds. The Ribes *floridum*, or American Black, may perhaps have qualities and habits rendering it desirable as a parent from which to produce new varieties.

CLASS I.—*Worthy General Culture.*

Black Naples.

The largest fruited and most productive of the Black Currant. Hardy in all sections of the States; but in the Southern said not to be productive.

Gondouin.

Gondouin Red.

From France. Strong growth, large, matures late, should be further tested, but not largely planted.

Knight's Sweet Red.

Varying from Red Dutch only in the fruit, being less deeply colored and slightly less acid; resembling more the White Dutch.

Red Dutch.

Long Bunched Red Dutch, | Large Red Dutch,
New Red Dutch, | Red Grape,
Morgan's Red.

Distinct from the variety usually grown in most old gardens, in the fruit being somewhat larger, clusters longer, and acid less sharp.

Victoria.

May's Victoria, | Goliath,
Raby Castle, | Houghton Castle.

Bunches very long, fruit red, somewhat larger than Red Dutch, and slightly more acid, ripens later and hangs a long time. Plants vigorous, of a spreading habit. Its very large long bunches make it the most desirable of all currants for market culture.

White Dutch.

New White Dutch, | Reeve's White,
White Crystal, | Morgan's White,
White Leghorn, | Large White.

Differing from the Red Dutch in being of a yellowish white, and less acid, therefore preferred for table use.

White Pearl.

A new variety we have not seen. Hovey says it is announced as having bunches four inches long, quarter inch in diameter, color of pearl; raised near Brussels.

White Grape.

River's White Grape.

Slightly larger in fruit than the White Dutch, with branches more spreading. The two are not sufficiently distinct to be desirable in small gardens.

Palnau.

Fertile Currant of Palnau.

This was described in the Horticulturist, 1852 as a new variety from Tours, in France, and of great excellence, flowering early, and producing abundance of fruit less acid than others of the reds. It requires yet to be tested in this country.

CLASS II.—*Unworthy farther Culture.*

American Black.

Unproductive.

Black English

Common Black.

Bunches short, poor flavor, unproductive.

Black Grape.

Ogden's Black Grape.

Better than the preceding, but not equal to Black Naples.

Common Red—Common White.

Well known old sorts.

Champagne.

Pale red, very acid.

Cherry.

Italy; comparatively new, very acid, poor bearer, and only of medium size, except with very high culture.

Missouri.

Missouri Fragrant, | Jefferson.

Valuable only as ornamental; fruit large, bluish black, flavor requiring a peculiar taste to admire it.

Missouri Large Fruited.

Missouri Eatable.

Similar to the foregoing.

Knight's Early Red.

Claimed to ripen ten days earlier than others, but does not sustain it.

Knight's Large Red.

Hardly to be distinguished from Red Dutch.

Striped Fruited.

Valuable only as a curiosity, in the fruit being striped slightly with white and red.

THE GOOSEBERRY.

Ribes Grossularia—Grossulacea of Botanists.

The Gooseberry is found wild in most of the northern and middle portions of our country, but, with few exceptions, its fruit is prickly and unworthy. On some of the islands of our upper Lakes, where the climate is moist and cool, there are varieties that produce abundantly of fruit, small in size, but of good flavor, smooth and free of prickles. Our garden varieties generally cultivated, have all been introduced from England, reproduction of new kinds from seed having been rarely attempted in this country, owing to the low price at which the best kinds can be purchased in England, and the almost certainty of success of importations made in the autumn.

The moist, cool climate of Lancashire, England, joined to the enthusiasm for culture of this fruit by a class of people employed there as weavers, and possessing only very small yards or gardens, has been the origin of most of our approved varieties. Gooseberry Shows were held in England as early as 1743; and it has long been customary to issue annually a GOOSEBERRY BOOK, in which all new varieties are noticed and all previous varieties named, with accounts of size, &c. This list has now swollen to over twelve hundred kinds; yet a selection embracing those truly best and most profitable, and with distinctive marks, would not exceed forty kinds.

Throughout our Southern and inland States, except in sections bordering on large bodies of water, it requires great care to succeed well with this fruit. The deep, rich soil of our Western praries suits the plant in its growth, but the heat and dry atmosphere, in sections distant from bodies of water, induce mildew to the destruction of perfect fruit. Easily grown from seed, it is worth the attention of some one to make experiments by raising from seed of our best varieties, sown in the rich soils of the West; the result of which, it might safely be expected, would be plants, vigorous, and comparatively free from disease as our natives.

Propagation.—Seed should be sown in rich loam, covered half an inch deep, and shaded from all but morning sun. This course is only advisable where production of new varieties is the object. The most general mode of propagating is by cuttings. These should be made of the new wood of present year, say in August, or early in September, or as soon as the season's growth is completed and the wood ripened. The cutting should be about ten inches long, with

all buds on the lower six inches cut out, and the lower end cut square and even, immediately underneath the bud. Plant perpendicularly in a soil two feet deep, composed of loam and sand, and exposed only to the morning sun; set the cuttings six inches deep, fill up two inches and tread very firm and compact, the remaining four inches fill in loosely. Grafting on the stalk of the Yellow Flowering, or Missouri Currant, has been practiced and is said to prevent mildew.

Transplanting.—This is best done in early October, at which time the bushes transplanted (if it has not previously been done) should be pruned back to within three buds of this year's growth. The distance of plants, one from another, should not be less than three feet, each way. Immediately after transplanting, cover the whole ground with three inches deep of tan bark, saw-dust, sea-weed, or new mown grass. Fresh plantations should be made every five or six years, as young plants bear better and larger fruit than old ones

Soil and Situation.—The soil should be two feet deep, well enriched, and of a loamy, clayey texture; where your ground is sandy, haul on clay or turf loam. The situation should be open, airy, and away from under shade of trees; but, where it can be done, shaded from the mid-day sun by a fence or hedge.

Culture.—Where mulching is practised, the ground dug up once *early* in spring, and liberally supplied with well rotted manure and soot from chimneys or stove pipes, will be all required, save the pulling of the few weeds which struggle through the mulch in course of summer.

Pruning.—This, in training the Gooseberry like the Dwarf Pear, consists much in the "pinching in" process, *i. e.*, by means of thumb and finger stopping back, in months of May and June, such branches as become straggling, irregular, or getting too much vigor for success of balance of plant; leaving the fruit on strong branches, and pulling most of that on weak ones. Late in August, or early September, the time best suited for cuttings, the plant may have such shoots cut out as have been neglected to be stopped in, or rubbed off, and are tending to make the top so thick as to obstruct free circulation of air. All suckers should be destroyed. Some cultivators prune in February; we prefer the fall. The following simple process of training or ripening is sometimes pursued, and with good success:—In a row, the first bush has the branches of the year's growth cut back one-third; the second bush has every branch cut back to two, close to the stem: the third, trimmed same as first; fourth, same as second, and so on alternately. The next year this

course is reversed, and No. one takes place of No. two. This supplies fresh wood, and some think the increased vigor given to the plant in only fruiting every other year has a tendency to prevent mildew.

Mildew.—This is regarded as a parasitical plant or fungus, attaching itself to the fruit and covering its surface as with an appearance of scurf. It is induced by heat, want of moisture in the atmosphere and free circulation of air, and perhaps unhealthy state of the plant. The remedies are, mulching the ground three or four inches deep, with tan bark, sawdust, salt hay, or sea-weed, serving to keep the roots cool and moist, and adding vigor to the plant. The salt is, by some, regarded as effective in itself; we think it acts only in creating moisture. Sprinkling the bushes freely *early* in spring, and after the fruit is set, twice a week, with strong soap suds or such as come from the weekly wash of families, is also a preventive.

Uses.—In its green state, the Gooseberry is esteemed for pies, tarts, &c., and is often bottled for winter use. This is done by filling the bottles nearly full of berries, then turning in clear soft water, then placing the bottles a few moments in boiling water, corking and sealing, and burying them in a cool cellar with necks downward.

Half ripened, the fruit is capable of yielding a juice, which after, fermentation and a little necessary compounding, forms a liquor resembling champagne.

The ripe fruit is agreeable to the palate, and, coming immediately after cherries when there is little variety, finds ready sale in market.

Varieties.—As before remarked, the varieties of the Gooseberry are far too numerous for any practical uses, very many of them varying only in some slight shape of the fruit or shade of leaf. We have therefore selected the following, as kinds which have been well tested in this country.

Bright Venus. (Taylor's.)

Branches erect; fruit whitish green, middle size, obovate, hairy, flavor best, hangs a long time.

Bunker Hill. (Capper's.)

Branches spreading; fruit yellow, large, roundish, smooth, flavor very good.

Champagne.

Branches erect; fruit red, small, roundish oblong, hairy, very good, extremely productive.

CROWN BOB. (Melling's.)

Branches spreading; fruit red, very large, oblong, hairy, flavor best.

EARLY SULPHUR.

Branches erect; fruit yellow, medium size, roundish, hairy, flavor best; ripens very early.

DUCKWING. (Buerdsill's.)

Branches erect; fruit yellow, large, obovate, smooth, flavor very good; ripens late.

GREEN WALNUT.

Branches spreading; fruit green, medium size, obovate, smooth, flavor best.

GREEN GAGE. (Pitmaston's.)

Branches erect; fruit green, small, obovate, smooth, flavor best, hangs late.

HOUGHTON'S SEEDLING.

Branches erect, spreading, slender; fruit pale red, oval, medium size, flavor good, productive. This is claimed an American seedling, and thus far has proved entirely free of mildew.

HEART OF OAK. (Massey's.)

Branches drooping; fruit green, very large, oblong, smooth, flavor best.

IRONMONGER.

Branches spreading; fruit red, small, roundish, hairy, flavor very good, productive.

JOLLY ANGLER. (Collier's)

Branches erect; fruit green, large, oblong, flavor best.

KEEN'S SEEDLING

Branches drooping; fruit red, medium, oblong, hairy, flavor best; early and productive.

LAUREL. (PARKINSON'S.)

Branches erect; fruit green, large, obovate, flavor best.

Pale Red.

Branches erect, slender; fruit pale red, medium, oval, flavor very good, very productive. We received this variety from England, in 1847, and have fruited it yearly since. It so closely resembles Houghton's Seedling that we have somewhat doubted the latter being distinct. We have grown it in good and in poor soil, with and without cultivation, and have never had it mildew; while for productiveness we have not its equal, a single branch often producing two hundred fruit.

Roaring Lion.

Branches drooping; fruit red, large, oblong, smooth, flavor best; hangs late.

Red Warrington.

Branches drooping; fruit red, large, roundish oblong, hairy, flavor best.

Sheba Queen. (Crompton's.)

Branches erect; fruit white, large, obovate, downy, flavor best.

Whitesmith. (Woodward's.)

Branches erect; fruit white, large, roundish oblong, downy, flavor best.

White Honey.

Branches erect; fruit white, medium, roundish oblong, smooth, flavor best.

THE AMERICAN GRAPE.

Vitis labrusca, L.— *Vitacea* of Botanists.

Throughout nearly every portion of the United States the Grape, in its wild state is found growing. Of these, classes are divided, the *vitis labrusca*, being our common Fox Grape, and from which we are yet to suppose the Diana, Catawba, and Isabella, are accidental seedlings; while the Frost Grapes *vitis cordifolia*, may perchance have been the parent of the Elsinburgh, Clinton, &c. Hardy, and almost equaling in delicacy many of the varieties of foreign Grape, they have become the companions of our advanced civilization, until almost every American can sit under his own vine and eat the fruit thereof. They have made our country already known as a wine-producing country, after repeated trials and failures with foreign varieties, and are destined to add millions to our wealth, and temperance to the character of our people. Records of immense vines are made, as growing on the rich soil of our valleys bordering on streams of waters, yet, when age is taken into consideration, we deem them all surpassed by a vine of Catawba Grape which we saw last year growing on Kelley's Island, in Lake Erie. It had been planted out but two years, yet had reached at least three hundred feet in length, with a girth, near the ground, of main stem, five inches, and had produced that year over 200 lbs. of fruit.

The secret of this extraordinary growth rests in the soil abounding in lime, while the wash-water, soap-suds, &c., &c., of the house had its escape near the roots.

We may also remark, that, upon this island, we have seen grapes, more perfectly grown and ripened, than in visiting any of the vineyards of the Ohio; and wine possessing all the boquèt and aroma so much esteemed by connoisseurs.

Vineyards.—The vineyards of the Rhine and of the territory of France have world-wide celebrity. The quantity produced by the latter country having been stated as high as 900,000,000 gallons annually, for which nearly 5,000,000 acres of ground were required.

"The Romans cultivated the vine at an early period of their history, and used wine in their libations at their sacrifices. Romulus, however discouraged its use, which prevented the introduction of it as a beverage until his edict was abolished. The general culture was then encouraged, and increased to such excess, that it became

necessary to restrict the use of wine by severe laws. At one time women were prohibited from using wine in any case whatever, under the penalty of death, and men until they had attained the age of thirty years. Cato mentions that the custom among relations of kissing women when they met, was to ascertain by their breath if they had been drinking wine.

"Pliny gives an account of a renowned Roman who so improved his farm, near the city of Rome, that in one year the product of his vines sold for four hundred thousand sesterces.

"The vine was highly esteemed by the heathen nations, and the invention of wine was ascribed by the Egyptians to Osiris, by the Latins to Saturn; and the Greeks elevated Bacchus to the rank of a deity, for having brought the vine from Arabia Felix.

"It is said by Pliny, that Bacchus was the first who ever wore a crown, and as the god of vintage, his crown is formed of the vine and its twining branches, bedecked with clusters of fruit. The manufacture of wine was known to the people in the early part of the Christian era, as we are informed that our Saviour, at a wedding, changed the water into wine.

"At several periods of the history of the world, the cultivation of the vine was prohibited by severe laws, but since the twelfth century a new impulse has been given, which extended through all portions of Europe; and we now find the banks of the Rhine, the mountains of Hungary and Switzerland, and the plains of France and Italy cultivated with more than two hundred varieties of the grape. Those most highly esteemed in France for the manufacture of wine, are the Burgundy grapes, three varieties of which produce the champagne wine. The German and Swiss grapes are principally celebrated as wine grapes, and four or five varieties are highly esteemed for their prolific bearing and regular crops.

"The Madeira grapes are all celebrated for wine. The table grapes of France are principally the Chasselas, the Frontignac and other Muscat grapes." Noah planted a vineyard and made wine; and among the bessings of the promised land are mentioned "wheat, barley, and vine."

Although we have record of wine being made from a native grape in Florida as early as 1564, no vineyards of note are spoken of in the United States until those established at Vevay and New Harmony, Ind., Lexington, Ky., &c., about 1812, the originals of which are are now mostly destroyed.

Jefferson recorded his opinion, that "no nation is drunken where wine is cheap; and none sober where the dearness of wine substitutes ardent spirits as the common beverage." A wish to sustain and exemplify this assertion, if not to exhibit the profitableness of the pursuit, would seem to have held sway in the minds of denizens of the "Rhine of America," i.e., the borders of the Ohio river;

above and below Cincinnati, where now, it is probable, over ten thousand acres are occupied with vines mostly of the Catawba grape, the produce of which is made mostly into, what is there termed, "dry wine," much resembling the better class wines of the Rhine. That the culture of the vine and manufacture of wines within the section named is only now in its infancy, no one will pretend to dispute; and ten years, we doubt not, will increase ten-fold the present amount.

Medical men have looked upon this establishment of vineyards in our own country with favor, in a point of view as relating to health. Prof. Kirtland, in 1842, says: "During an extensive practice in the medical profession, for more than twenty-five years, I have frequently found it important to employ wine and other diffusive stimulants as medicines; and while I am disposed to go as far as any one in excluding strong drinks from the daily use of people in health, I must express my satisfaction at finding we can produce, in our own country, a pure, healthy wine, well adapted to medicinal purposes, and far superior to the poisonous foreign compounds, that often find their way to the bedsides of the sick, under the names of "Lisbon," "Madeira," &c., &c.

Most of the earlier planted vineyards in this country were of foreign vines, which, not succeeding, native varieties were adopted; and at this time only two, the Catawba and Schuylkill, are advised to be planted to any considerable extent.

Notwithstanding the borders of the Ohio River have thus far taken the lead in production of wine and extent of vineyards, there is no good reason to suppose *that* the boundary where success may be had. On the contrary, abundant sites may be found throughout the entire State of Ohio and West, where, by application of manures suited to the wants of the vine, and found deficient in the soil, equal success would be had as on the Ohio River—Seneca County and Kelley Island ripening the Catawba equally as well, if not superior.

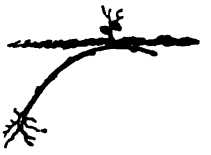
The whole extent of Western Prairies, rich in all the constituents of the Grape vine,(if we except Potash, and, possibly, in sections, the phosphates)are yet destined to be tenanted with immense vineyards, and at no greater outlay of expense, for constituents toward successful culture, than the vineyards of the "Rhine of America," which have thus far been made dependent on the natural inherents of the soil, and have already shown failure, *i. e.*, decay by rot, where food, in the form of potash and bone dust, has not been supplied.

North of latitude 42,° however, it may be doubted whether saccharine sufficient can be obtained from the most valuable wine grapes yet known, to make wines in competition with those grown farther South; but as this subject is one so extensive that, if thoroughly written on, would more than occupy the number of pages intended for this entire book, we must forbear, and only devote our space to such instructions

as will enable the inexperienced to make the first start correctly, promising that once interested and engaged in the subject, disposition will be found, freely to avail himself of all works yet issued devoted to the subject.

Propagation. By Seed.—This course is only pursued where intended to originate a new variety. At this time, large offers of premium are circulated in the journals of the day for the production of a hardy grape, surpassing the Catawba as a wine grape. Fertilizing some variety of the *vitis vinefera* with pollen of *vitis labrusca*, or *vice versa*, will be the course to pursue with any expectation of success; the seed so fertilized, gathered carefully and sown in rich vegetable mould. Cultivation of our wild grapes only increases the size without ameliorating their character.

By Cuttings.—These are taken from the strongest vines of the last year's growth, cut to a length, embracing three or four buds, according as the joints are long or short of the variety; where possible, a little piece of the old wood left on the lower end is preferred. These being made in the fall, when pruning the vines, are laid away in bundles in a cool cellar until spring; when, as soon as the ground is ready, they should be soaked or swollen in a tub of water for four or five days, or until the buds become fully swollen. They are then planted in rows, if in the nursery, by bending into nearly the form of a half circle, as represented by fig., which shows the cutting as it appears in about one month from planting. By this, it is seen that the upper bud is covered nearly an inch: in clayey soils, or those retentive of moisture, the upper bud should be just even with the soil. The rows, in nursery, should be three feet apart, and the plants one foot distant each in the row. This is the best and most successful mode of growing the grape vine. The earth should be pressed firmly at the base of the cutting, and left light and loose at top.



By Grafting.—The best season to perform this operation is when the leaves are about half grown. Earlier, the sap is very abundant, and at same time watery, and grafts do not succeed well. Whip grafting, as it is termed, is best; or, if stock and graft are near of size, saddle grafting. The graft should have been cut early in the season, before any flow of sap or swelling of buds, and have been kept in a cool yet moist place. The point on the stock at which it is best done, is at or near the ground, and, after insertion, earth up a small mound around it, to protect from change of temperature, sun, &c. If the operation be performed farther up on the stalk, wrapping

the place of union with grafting clay will be requisite. Care must be taken that the *inner* bark of both graft and stock join each other perfectly, otherwise success will be uncertain. The practice is only advised where a new variety is desired to be tested, as new vines are almost alway better than the patching up of old, neglected plants, which have never been "cared for" either in branch or root.

Transplanting and distances.—In taking up the vines at one year's growth from the cutting, (which is best,) care should be taken to mutilate as little as possible, and also to keep the roots from exposure to the sun, or drying air or winds. Cut back the growth of the past year to two buds. Have the ground mellow, rich, dug deep; the hole broad; spread the roots carefully and as naturally as they grew; after having pruned each end and bruised or broken root with a *sharp* knife, fill in the earth carefully and finely until only the two buds are visible, then *avoid treading* on it. The distance apart, if making a vineyard plantation, depends on the variety. That for the Catawba or Isabella should be four by six feet; the Schuylkill and Herbemont, five by seven feet; the Missouri and Clinton, three and a half by three feet. These two latter should be pruned low, while the former varieties may rise seven to eight feet.

Cost per acre of Vineyard.—The estimated cost of trenching, furnishing cuttings, stakes, and planting an acre of vineyard, is not far from two hundred dollars; and at the expiration of three years it may be estimated to yield annually about 200 gallons of wine, at a cost, however, for dressing vines, pruning, gathering, &c., of about seventy-five dollars; leaving, therefore, about one hundred dollars a year (supposing the wine to sell at one dollar a gallon) as the net profit per acre. The quantity here estimated will, no doubt, be thought low by many, but while it will often exceed this quantity, seasons do occur when even less is the result; and we therefore stand on the safe side if we found our vineyard on this basis of expectation.

Position and Soil.—R. Buchanan, Esq., who has written a capital treatise on the "Culture of the Grape," as well as practically trained the vine, has the following on this point:

"A hill side with southern aspect is preferred, although an eastern or a western exposure is nearly as good. Some have recommended the north, on account of safety from late spring frosts, but it will scarcely afford sun enough to ripen the grapes in cold, wet seasons (if the declivity is steep), and may perhaps be more subject to 'the rot.' Any undulating surface, if dry, is preferable to a level one.

"*The Soil* best suited for a vineyard, is a dry calcareous loam—

with a porous sub-soil—not retentive of moisture; if mixed with some gravel or small stones, so much the better. Some prefer a sandy soil with a gravelly substratum; as in this the grapes are less subject to rot; the juice, however, is not so rich,—lacking in saccharine matter,—and in dry seasons the vines will suffer from the drought, shedding their leaves prematurely, and preventing the grapes from ripening well. In warm, sandy soils, the fruit-buds on the vines, if swelled prematurely in autumn, are sometimes killed by the frosts of a severe winter.

"Any soil underlaid by a stiff, wet clay, is to be avoided, as also wet or spongy lands. No trees should be allowed to grow within one hundred feet of the vineyard."

Preparing the Ground.—"In autumn, or early winter, dig or trench the ground all over, two to two and a half feet deep, with the spade; this is far better than plowing; turn the top soil under.

"Wet spots in the vineyard may be drained by small stone culverts, or by what is termed a French drain, a ditch, with some loose stones thrown into it edgewise, covered with flat ones, and filled up with the earth again. Surface draining may be obtained by *concave sodded* avenues of ten feet wide, and intersecting each other at 100 or 120 feet, thus throwing the vineyard into squares of that size. This will do for gentle declivities; but steep ones must be terraced or benched with sod or stone. These benches should be as broad as they can be made conveniently, and with a slight inclination to the hill, that they may be drained by stone or wooden gutters, running into the main trunks, to carry off the water without washing away the soil. This is important, and requires good judgment and skill.

Cultivation of the ground.—The first two years the grounds should be kept clean of weeds, by use of the German hoe, a two pronged instrument. A light plow is sometimes used in the spring, but the best vine dressers object to it. The third year, and afterwards, the earth should be kept clean until July, after which time it should not be stirred; this especially through the Western prairie country.

Pruning and Training.—Tact and judgment are necessary to perform this portion of vineyard work, and none but general instructions can be given. Buchanan says: "In the spring, cut the young vine down to a single eye, or bud, at first; if two are left for greater safety, take off one, afterward; drive a stake six or seven feet long firmly to each plant. Locust or cedar is preferred, but oak or black walnut, charred at the end, driven into the earth, or coated with coal tar, will, it is said, last nearly as long. Keep the young vine tied neatly to the stake with rye or wheat straw; pick off all suckers, and let but one stalk or cane grow.

"The *second spring* after planting, cut down to two or three eyes.

or joints, and the *third year* to four or five; pinching off laterals, tying up, and hoeing the vines as recommended above. Replant where failures have occured. The third year the vines will produce a few grapes. Train two canes to the stake this year, and take off laterals." We advise the cutting down or pruning to be done as soon as the fall of the leaf in autumn, but any time when the frost is not in the wood will answer. "Pruning the *fourth year* requires good judgment, as the standard stem or stalk has to be established." "Select the best shoot or cane of last year, and cut it down to six or eight joints, and fasten it to the adjoining stake in a horizontal position, or bend it over in the form of a hook or bow, and tie it to its own stake. The ties should be of willow. This is the bearing wood. The other cane, cut down to a spur of two or three eyes, to make bearing wood for the next season.

"'Give the shoot the first tie on the stake nine inches from the ground, and the second, nine inches above it; then bow it over to the neighboring stake in a horizontal position, and give it the third tie to the stake, at that top of the vine.'

"In the succeeding, and all subsequent years, cut away the old bearing wood, and form the new bow, or arch, from the best branch of the new wood of the last year, leaving a spur as before, to produce bearing wood for the coming year, thus keeping the old stalk of the vine down to within eighteen to twenty-four inches from the ground. The vine is then always within reach, and control."

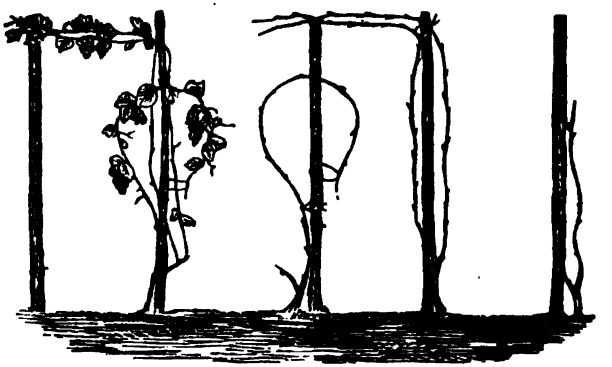


Fig. 4. Fig. 3. Fig. 2. Fig. 1.

To show fall and summer pruning, the above figures are inserted.

Fig. 1. The vine *second* year before pruning.
Fig. 2. " " *third* " " "
Fig. 3. " " *fourth* " pruned.
Fig. 4. " " *fourth* " summer training.

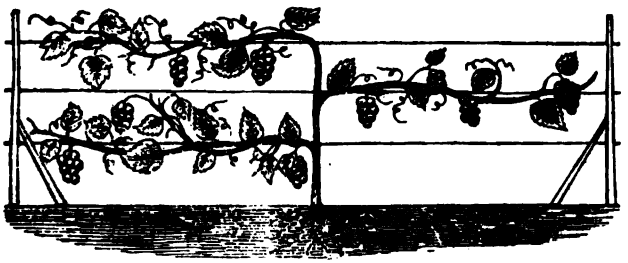
Summer pruning, or pinching in, should be cautiously and carefully done. Every leaf acts as a lung to the plant, and, unless one has experience, the safest plan is to avoid any summer pruning except just pinching the extreme ends of shoots after the fruit has acquired the size of large shot, and taking away of all suckers. Dr. S. Mosher writes as follows upon this part of pruning:

"Soon after the grapes are set and about the size of common shot, my rule is to pinch off the ends of the bearing branches—leaving four good leaves for the first bunch of grapes, and two additional leaves for every other bunch on the same branch—so that if there are three bunches there will be eight leaves to supply their wants. I have tried leaving these bearing branches to grow their full length without pinching them off, but I find they encumber the ground too much, without any perceptible improvement of the fruit. After these bearing shoots have been pinched off, especially if done too early, the buds in the axils of their leaves will push out. These I pinch off also when quite young, sometimes permitting one or two leaves to remain on them. The leaves on these laterals do not seem to subserve the wants of the fruit, like the original leaves on the bearing wood, which should be carefully preserved. At the fifth spring pruning, the vines will have the two good canes, as in the previous spring, with the addition of the old hoop or circle that bore fruit. This I cut off as close down as possible to the uppermost cane, and the other two canes are managed exactly in the same manner as in the preceding year. I never allow the old stock to rise more than six to ten inches above the ground; the lower they are kept the more healthy they will remain and be much more easily managed. Pruning the vine for wine requires a bold hand and much firmness of purpose, otherwise the old stock will get too high and become encumbered with too many shoots. It must be borne constantly in mind that one single bearing shoot or cane, having from six to ten eyes, will throw out as many bearing branches. From these ten bearing branches it will be easy to select from ten to fifteen bunches. These bunches, in any ordinary favorable season, may be made to yield one quart of good grapes, which will make, at least, a pint of wine. One acre of ground planted three feet by five will contain 2904 vines. If each vine, then, yields one pint of wine only, there will be 2904 pints, or 363 gallons, from each acre. This is more than the average yield per acre—and for the reason only that we are too greedy; by overloading the vines, we fail to obtain a reasonable quantity, as well as a good quality of wine."

Dr. Lindley, good authority in England, has the following, rela

tive to autumn stopping or pruning, which is equally applicable here: "When, however, the branches have grown for many weeks, and are in the autumn begining to slacken in their power of lengthening, theory says it is then right to stop the shoots by pinching off their ends, because after that season newly formed leaves have little time to do more than organize themselves, which must take place at the expense of matter forming in the other leaves. *Autumn*-stopping of the vine shoots is therefore advantageous; for the leaves which remain after that operation will then direct all their energy to the perfection of the grapes."

Trellises made by setting posts well braced at either end of the row, and running coarse wire through standards intermediate from post to post, we have seen much practiced elsewhere than at Cincinnati, and with great success. The vines are trained horizontally as represented in the accompanying figure.



And when heat and full exposure to the sun's rays are desired, we think it preferable to the mode previously described.

For private gardens where ground is scarce, the vine should be well supplied at its roots with liquids hereafter named, and permitted to run or ramble upon lofty trellises. Spur pruning, which consists in training the old or main stem, and yearly cutting back the laterals to two or three good buds, must here be pursued; care should be taken, however, not to cut back and preserve the same side branches or spurs from year to year, lest by so doing they soon become enfeebled, and the fruit ripens imperfectly; but new side shoots should be yearly selected of the strongest growth and cut back to the two or three bearing buds, while that of last year's bearing is cut away.

Manures.—The analysis made by Prof. Emmons, of the common wild grape vine is as follows

	Wood.	*Bark.*
Potash,	20.84	1.77
Soda,	2.06	9.27
Chlorine,	0.02	0.40
Sulphuric acid,	0.23	trace
Phosphate of lime,	15.40	5.04
Phosphate of peroxide of iron,	1.20	5.04
Carbonic acid,	34.83	32.22
Lime,	17.33	39.32
Magnesia,	4.40	0.80
Silex,	2.80	14.00
Soluable silica,	0.00	0.30
Coal and organic matter,	2.20	1.70
	100.21	100.86

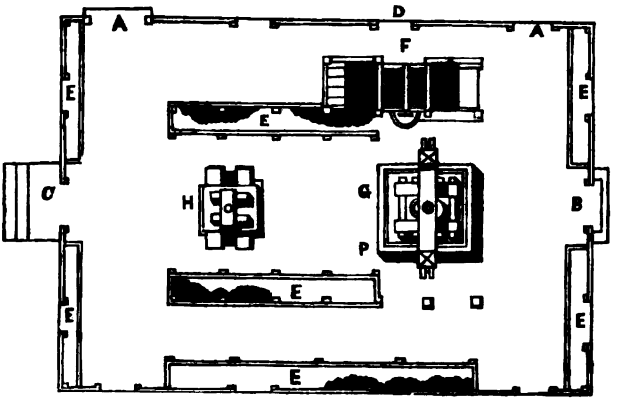
From this any one moderately conversant with the components of soils can readily see what is required for his vines. Burying the refuse cuttings and leaves, sprinkling on gypsum, (plaster of Paris,) and supplying freely the soap-suds, and wash-water of a family, with animal (or barn-yard) manures, and wood ashes, are most advisable, aside from the specific application of potash and bone dust.

Insects and diseases.—The aphis and slug, described fully in "Harris' Treatise," appear in the months of May and June. They are easily destroyed by syringing with tobacco-water. The grape vine flea-beetle, (*Haltica Chalybea*) a small, glossy, greenish-blue beetle about three-twentieths of an inch long, sometimes preys upon the buds, causing them to appear as if bored. This insect was first (we believe) described by David Thomas, in Silliman's Journal of Science, and is also noticed in Harris' Treatise. The eggs are deposited early and soon change to a greenish, smooth worm, which preys upon the tender leaf and young bunches. It is destroyed in this state by syringing with tobacco-water or sifting lime over the vines when wet with dew. The rose-bug (*melolontha*) occasionally attacks the vines in great numbers, eating off the upper surface of the leaf and causing the vinous fibres left to look like a sieve. They are best destroyed by spreading a cloth underneath and shaking the vines in the cool of evening or near sun-set. They will fall and may then be burned. A few dollars expended in this way, we have known to have saved the entire crop for the year, as well as prevent their presence to any extent another season. The curculio sometimes attacks the grape, but thus far we have never heard of any serious injury to the crop.

Mildew is rarely met with, when specific nutrition has been applied. It is easily checked by free sprinkling of powdered sulphur over the vines and earth when wet with dew. It is a fungus attack-

ing the plant when not in perfect health. The *rot*, so much deprecated by Vignerons, at Cincinnati, we regard as attributable to same cause as mildew, viz: a want of consistent food for the perfection of the fruit. Some, we notice, consider it attributable to too late and clean cultivation; and as late cultivation only tends to late growth, and formation of new leaves to exhaustion of what is required for perfection of those already formed, the theory is good, so far as it goes; and possibly in soils greatly deficient in the constituents to perfect the grape, it may in a measure be the cause; but in soils well supplied with the required food, late cultivation would only cause the bursting of new buds and continuance of growth.

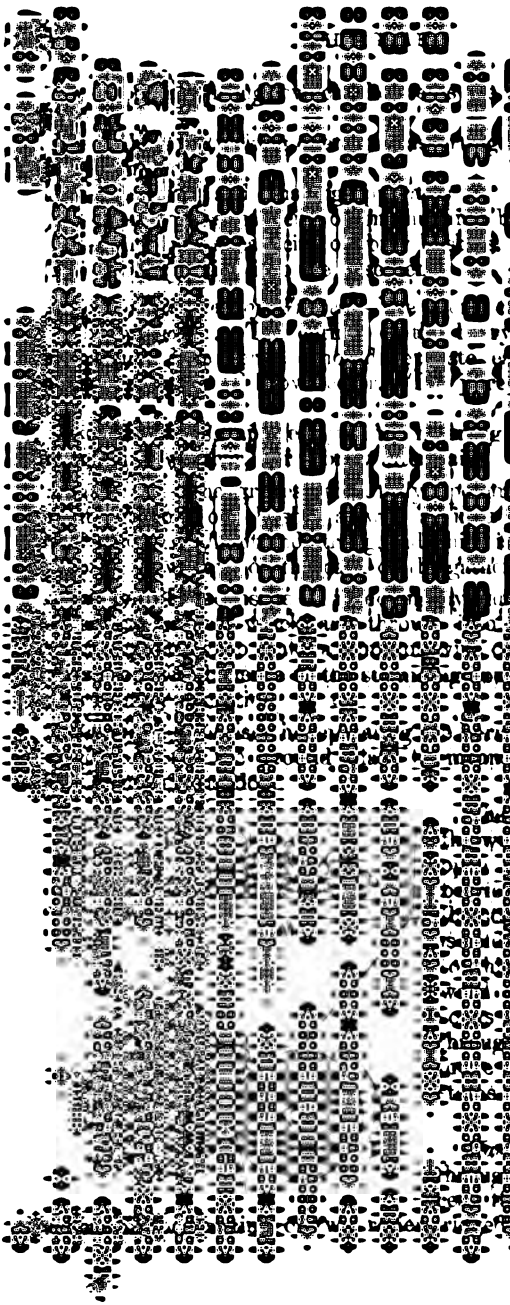
Uses.—Universally esteemed when well ripened, as a dessert fruit, the grape is also highly valued by many physicians, as in its free use tending to health and the prevention of rheumatic affections of the human system. For culinary use, and for making of preserves, they are sought for, both in a green and ripened state. Carefully gathered when ripe, laid in heaps for a few days on the floor of a cool, dry room, then spread out for one or two days, and packed in shallow boxes with layers of cotton batting at bottom and intermediate between layers of fruit, as well as between bunches, they may be placed in a cool room and kept fresh throughout most of the winter. Last, though not least, made into wine, a sketch of the details of which, with cuts illustrative of plan of a wine house and press, we extract from the "Western Horticultural Review:"



A.—Door opening to the vineyard by which the grapes are brought into the wine house.

B.—Back door of wine house.

C.—Front door of wine house.



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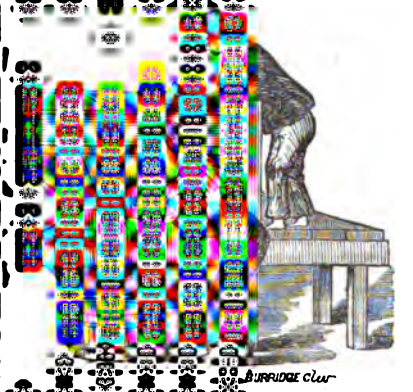

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handsome. The vine fruits freely. The bunches are usually large, very compact, the berries *crowding* against each other. On some bunches they will occasionally hang loose. In color, they are very dark; when ripe, almost black, and of large size; the flavor, sweet and vinous, very juicy; the skin, thin and slightly acid and astringent. The bunches will average a pound weight at maturity. The vine requires and deserves careful cultivation in a rich and *proper* soil, to do it justice; it is *perfectly hardy*. A southern aspect suits it best, and a net tacked over it in winter, *not to protect it from the frost, but from the sun.*"

Bland.

Bland's Virginia,
Bland's Madeira,
Powell,
Bland's Pale Red.

Found on the eastern shore of Virginia by Col. Bland. It is not of value north of Philadelphia, on account of not often ripening, and is by many discarded from its habit of only bearing moderately. In 1820, it was well grown and ripened in New Haven, Conn., on sandy soil; and in 1828, sent to Northern Ohio by Geo. Hoadley, Esq. As a table grape, in latitude where it will ripen, it is of the best.

Foliage, a light shade of green, smooth; propagated by layers; *bunches*, long, loose; *berries*, round, on long stalks or pedicels; *skin*, pale red, thin; *flesh*, slightly pulpy, slightly astringent, but of pleasant, delicate flavor. Late in ripening, and valuable for packing away for winter use.

Catawba.

Red Muscy,
Lebanon Seedling,
Catawba Tokay,
Singleton,
Arkansas.

Through Dr. S. Mosher, of Cincinnati, Dr. Solomon Beach is said to have found this variety, in the summer of 1821, growing wild in Buncombe Co., North Carolina, on the border of the Catawba river. We have found this to ripen equally as well, and as far north as the Isabella, when correctly pruned and grown in dry or well drained soil. It is esteemed both for dessert and wine use. In growth and foliage, it resembles Isabella, except that the wood is darker color, shorter jointed, and more round, and, at base of every leaf, there is a white downy spot.

Bunches, medium size, shouldered; *berries*, nearly round, large, pale red, becoming deeper when fully ripened in good soil, and covered with a lilac bloom; *flesh*, slightly pulpy, sweet, juicy, with a rich aromatic, musky flavor.

Too often gathered when only just turned in color, and then sour and unpalatable; hence the impression of many that they are not equal to Isabella.

Pond's Seedling, To-Kalon, Clermont, White Catawba, and Zane, are sub-varieties of the Catawba, but not equalling it. The "Mammoth Catawba" is also a sub, which, under high culture, surpasses the original only in size.

Clinton.

Worthington.

This variety is claimed to have its origin in Western New York, but we have seen vines taken from the woods in Northern Ohio that so closely resemble, in both leaf, wood, and fruit, that grown under this name, as to make us doubt its coming from the origin stated.

It is not a strong grower, although perfectly hardy, and suited to border planting three feet apart, and stake training not exceeding four feet high, in gardens. Its greatest recommendation is that it ripens some ten days or two weeks earlier than Isabella, and, therefore, suited to higher or more northern latitudes.

Foliage, small; *wood*, short jointed; *bunches*, medium or small, not shouldered, compact; *berries*, nearly round, small, black, thin blue bloom, pulpy, juicy, with a harsh flavor; productive.

Diana.

"This," says Mr. Downing, "is a seedling from the Catawba, grown by Mrs. Diana Crehore, near Boston, Mass." It is smaller size than its parent, but has the character of maturing its fruit two weeks earlier. It is yet comparatively new, and, although stated to have surpassed its parent, when grown at Mobile; at Cincinnati it has not equaled the Catawba.

Bunches, below medium size, compact; *berries*, round, delicate pale red; *flesh*, juicy, sweet, little pulp, rich, and slightly resembling Catawba in flavor.

Elsinburgh.

Elsinboro, | Elsinborough,
Smart's Elingburgh.

The spelling of this name is matter of some difference in opinion among horticulturists, but the manner we adopt, being that of all previous writers, we choose to continue it. The variety is said to have come from a village in Salem Co., N. J. It is a nice little grape, suited for the dessert, and for growing on trellises in gardens. A moderate, regular bearer, ripening a little before or with Isabella.

Wood, slender, long jointed; *leaves*, five lobed; *bunches*, medium, loose, shouldered; *berries*, small, round, thin skin, black, covered with blue bloom; *flesh*, without pulp, melting, sweet; "best."

Herbemont.

Herbemont's Madeira

The origin of this is yet in doubt; some claiming it same as Lenoir, and a native; others claiming it as a French variety. Its hardy character and resemblance in foliage to the River grapes, however, seem rather to favor its being a seedling of our States. In fruit, it does not differ from the Lenoir, but in wood, N. Longworth says, it is quite distinct.

Only moderately vigorous; *wood*, dark color; terminal leaves, red or brownish; *bunches*, large, compact, shouldered; *berries*, small, round; *skin*, thin, purple, slight bloom; *flesh*, tender, without pulp, sweet, excellent, juicy, vinous, valued for dessert, and yields a wine like Spanish Manzanella.

Isabella.

This variety has, thus far, been stated to have originated in South Carolina, to have been taken thence to a garden in Brooklyn, N. Y., and there given to William Prince, who propagated, distributed, and named it after Mrs. Isabella Gibbs, who then, 1816, owned the garden. On the authority of Lewis F. Allen, it was grown several years previous at Norwich, Connecticut, as the "Vernet Grape," and claimed to have been brought from one of the French West India Islands. Other authority places it as a common variety of Spain, and imported by a Mr. Laspeyre, who cultivated and sold it as "Laspeyre Grape" in 1810. Geo. Hoadley, Esq., states that in 1824 it was growing in Elizabethtown, N. J., where it was said to have been brought 30 years previous, from South Carolina or Georgia.

We incline to belief of its being a native; its hardihood, habit, and character, all tending that way; but, come from whence it may, its vigorous habit and productiveness will ever render it a favorite.

As a wine grape, it is not esteemed. *Bunches*, large, rather loose, shouldered; *berries*, oval, large, dark purple, when fully ripe nearly black, covered with a blue bloom; *flesh*, tender, with some pulp, which lessens as it ripens, juicy, sweet, rich, with slight musky aroma.

Hyde's Eliza, Troy Grape, Pennsylvania, Marion, Sherman, Chillicothe Seedling, and Lee's, are all sub-varieties; not equal to the original.

Lenoir.

Sumpter? | Clarence?

This differs from the Herbemont only in being of "more vigorous growth, wood, light colored, with a light blue cast; terminal leaves, green." So says N. Longworth. All we have ever been able to obtain have the character of Herbemont.

Imitation Hamburg.

A native variety we have not seen. Its fruit is said to be "large, dark purple, or as large, *skin*, as thin, *pulp*, as soft and juicy, but of inferior aroma and flavor to the Black Hamburg." Origin unknown.

Missouri.

Missouri Seedling.

Said to be a native of Missouri: it is of slow growth, short jointed, and, like the Clinton, suited to border culture in gardens. From it a wine is made resembling Madeira.

Leaves, deeply cut, tri-lobed; *bunches*, below medium, loose; *berries*, small, round; *skin*, thin, almost black, very little bloom; *flesh*, tender, little pulp, sweet, and pleasant; "very good."

Norton's Virginia.

Norton's Seedling.

A native, unworthy culture. *Bunches*, long, little shouldered, compact; *berries*, small round, dark purple, pulpy, harsh.

Ohio.

Longworth's Ohio, | Segar Box.

The original of the vines now known under this name were some cuttings left in a segar box at the residence of N. Longworth, Esq, Cincinnati, during his absence from home. Its true origin is yet in doubt. North of Cincinnati it does not succeed, and wherever planted should have long range on a trellis. Only valued for table use.

Bunches, large, loose, shouldered; *berries*, small, round, nearly black, blue bloom; *flesh*, without pulp, sweet. Only suited to the amateur.

Schuylkill.

Schuylkill Muscadel,	—— Muscadine,
Alexander,	Cape Grape,
Spring Mill Constantia,	Clifton's Constantia,
Madeira, *of York, Pa.*,	Tasker's Grape,

Winne.

From the banks of the Schuylkill, Pa. Its value is only as wine grape, and for that, not equal to Catawba. We have found it extensively distributed North and West as the Isabella. As the leaves are much more downy, it is easily detected in foliage, and the bunches being not shouldered, while the Isabella is always shouldered.

Berries, often large, roundish, oval, thick skin, quite black; *flesh*, firm pulp, juicy, musky, often harsh.

SCUPPERNONG.

Fox Grape, *of the South*, | American Muscadine, *of the South*,
Bull or Bullet, " | Roanoke, "

A distinct southern species, *vitis vulpina*, too tender for the north, highly esteemed throughout the entire southern States, where it is much grown as a wine grape in vineyards, and is found wild from Virginia to Florida.

Species, dicœcious; *leaves*, small, roundish, coarsely serrated, glossy on both sides; young shoots slender, old wood smooth. The White and Black varieties differ only in the color of fruit, the White being light green, and the Black, dark red, with tendrils of vine corresponding with color of fruit.

Bunches, small, loose; *berries*, round, large; *skin*, thick; *flesh*, pulpy, juicy, sweet, with a strong musky scent.

Minor's Seedling, Shurtleff's Seedling, and some others are cultivated in localities, but their *good* qualities seem destined to remain in circumscribed limits, not having yet been seen, when cultivated away from their first friends

From the *ad-interim* reports of the Pennsylvania Hort. Society we copy the following accounts of two new seedlings:

From William Canby, Wilmington, Delaware:—A Seedling Grape. *Bunch*, four and a half inches long, by two and three-quarters broad, so compact as frequently to destroy the rotundity of the berry; *berry*, from seven-sixteenths to nine-sixteenths of an inch in diameter; roundish, inclining to oval; *skin*, of a violet color, thickly covered with bloom, and semi-diaphanous; *seed*, small, dark cinnamon; *flesh*, tender, very juicy, not pulpy; *flavor*, sweet and pleasant; *quality* "*best*" for a grape that will grow in open culture. *Leaf*, trilobed, but not deeply, interruptedly serrulate, auriculate.

From Gerhard Schmitz:—A Seedling Grape. Large; oval; purple; *bunches*, loose, large; resembles the Isabella in appearance and flavor; quite equal to it in quality, and perhaps a little earlier.

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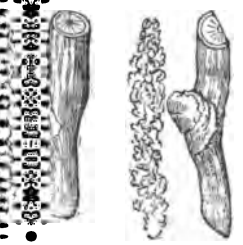


yards, in cities,

&c., such varieties as the Black Prince, Traminer and Royal Muscadine, may be grown in the open air by bending down the vines in the month of November, and covering them with tan-bark, or other mulch, and raising them again to their position in April. Free supply of wood ashes and soap-suds will be found requisite to hasten their growth and maturity of fruit, as well as prevent mildew.*

Cold Houses.—By this term is meant an enclosed structure of wood or brick, with a sloping roof covered with glass. These structures as made at the east, and by a few wealthy men at the west, and represented in the Horticultural journals of the day, are too expensive to make the growing of the better foreign grapes general at the west. But expensive structures are not necessary; many a man at the west has a south side of a building unoccupied; this may serve as the back of his cold-house, by setting up pieces of four inch scantling against the building, nailing boards to it and filling in between with tan-bark, saw-dust, or fine charcoal, he has the back; now, four inch square posts rising four feet from the ground, at a distance of say fourteen feet from the back, boarded on each side, and filled in same as the back, make the front wall; leaving, however, two spaces six feet from either end, of about two feet square, for hanging shutters. Now the back wall being ten feet high, the ends are to be made in same way as the front, giving, of course, the slope from back to front, and leaving out at one end space for a door-way, and at the highest point of sides near the back at each end, a space for swinging shutters of say two feet square; these opened will give ventilation, in connection with those in the front wall. This done, a joiner will be required to fit on a plate of two inch plank all around, and fit in rafters and sash; the sash should be the entire length of width of house; styles four inch wide by one and a half thick, bars one inch wide beveled to half inch on the under side, the upper style or head piece six inches wide, the lower one fourteen inches; the rafters should be placed so that sash cannot be over forty-two inches wide, or sufficient for five lights wide of six inch glass. When the location of such house is not in a very cold climate, or where the thermometer rarely falls below zero, cotton cloth dipped in boiled oil and varnished will answer a very good purpose; but, perhaps in the end not be as cheap, as its durability will only be about two years. Those who wish for more expensive houses, we advise to pur

* Geo. Hoadley, Esq., says, that in 1820 to 1830 there was growing in the garden where he then resided, in New Haven, Conn., many white grapes, received from David Deforest, as White Sweet-Water, which never mildewed. This garden was sixty or seventy rods from the harbor, (or salt water.) The prevalent winds were from the harbor, in summer, and in storms the shrubbery not unfrequently covered with spray.

chase "Allen's Treatise on the Grape," or if possible, visit the grape house of Wm. Resor, Esq., of Cincinnati.

Vine Borders.—Upon the formation of vine borders for cold, as well as forcing houses, more has been written and published than one person could read at rate of ten hours a day, in one entire month. Some advise the formation of the border all outside, while others prefer inside. Our advice is, let the border embrace a width three feet inside the front wall and six feet outside, making a border nine feet wide; if sandy ground, no care will be required to form a drainage; but if on clayey, retentive soil, dig out all the earth three feet deep, form a drain in center at bottom, leading away from the house, prepare fresh virgin earth or turf from old pastures or woods, and mix well rotted barn-yard manure in about equal quantities, or perhaps a little most of the soil, add to this one tenth in quantity each of gypsum, (plaster of Paris,) and ground bones, and one sixth of wood ashes; let it be well mixed before putting in the border. Parings of horses' hoofs, and cinders from a blacksmith's shop, street scrapings, leather paring, old rags, bones, etc., are all used and all good, but the above named materials, with liberal watering with soap-suds and occasional sprinkling of sulphur (which will be necessary at times to check mildew) will for a time give good growth of vine and fruit.

Planting and Training.—The vines, being obtained from a nursery, generally come in crocks or pots; the earth should be well wet, and then by inserting the finger at the hole at the small end or bottom of the crock, the whole ball of roots entire is pushed out; now plant just outside the front wall, and so that you can run the stem immediately under, leaving the roots only outside; let each plant stand half way between each rafter, and as they grow train to a wire fastened at top each of front and back wall so as to be six inches below the glass. Spur pruning is regarded best for cold houses, and is plainly described as follows: "In pruning in the fall, after the first year's growth, each alternate eye is disbudded on each side of the cane, leaving those wanted for breaking next season about fifteen inches apart. The next season, when pruning for spurs, the side shoots are cut back to three eyes, or even four, according as the lower buds may be plump and well rounded. In breaking, each bud puts forth a shoot; the most promising one nearest the top, and the one at the base, is allowed to remain, and the other is rubbed out. The top one is allowed to bear, and the fruit on the bottom one is pinched out. The fruit bearing spur is stopped three or four joints above the fruit, and the other one next to the base is also stopped, wher it has grown seven or eight leaves. They are now trained as shown in the following figure.

"*A.* is the bearing shoot, and *B.* the one not to be fruited till next year; at next pruning, (or what is still better, two or three weeks previous,) *A.* is cut clean out to the base of *B.*, and, when the leaves fall, *B.* is cut back to three eyes as *A.* was last season, and so on from year to year." Every fall at approach of cold weather take down the vines, lay them on the border inside and cover with tan-bark four inches deep; cover the border outside same depth with barn-yard manure.

Routine of Culture.—The following brief instructions, from A. J. Downing, contain all that is essential for a cold house: "In a vinery without heat this is comparatively simple. As soon as the vines commence swelling their buds in the spring, they should be carefully washed with mild soap-suds, to free them from insects, soften the wood, and assist the buds to swell regularly. At least three or four times a week, they should be well syringed with water, which, when the weather is cool, should always be done in the morning. And every day the vine border should be duly supplied with water. During the time when the vines are in blossom, and while the fruit is setting, all sprinkling or syringing over the leaves must be suspended, and the house should be kept a little more closed and warm, than usual, and should any indications of mildew appear on any of the branches, it may at once be checked by dusting them with flour of sulphur. Air must be given liberally every day when the temperature rises in the house, beginning by sliding down the top sashes a little in the morning, more at mid-day, and then gradually closing them in the same manner. To guard against the sudden changes of temperature out of doors, and at the same time to keep up as moist and warm a state of atmosphere within the vinery as is consistent with pretty free admission of the air during sunshine, is the great object of culture in a vinery of this kind.

Insects.—The aphis or "vine-fretter," is destroyed by fumigating, *i. e.*, burning tobacco in the house, and syringing the vines freely afterward. If red spiders are troublesome, syringe the vines at evening, and dust the leaves with flour of sulphur.

VARIETIES.

Feeling that a multiplicity of varieties would only mislead and confuse the practical man, and our own experience with foreign grapes not having been sufficient to enable us fully to decide on which to recommend, we adopt and describe few besides those voted worthy of general cultivation by the American Pomological Society.

Black Hamburgh.

Warne 's Black Hamburgh,	Purple Hamburgh,
Red Hamburgh,	Brown Hamburgh,
Dutch Hamburgh,	Salisbury Violet,
Hampton Court Vine,	Gibraltar,
Valentine's,	Frankendale.

This variety is one of the most esteemed for the vinery. In sheltered locations, out of doors, in cities south as far as Cincinnati, it does well with protection in winter. A good bearer.* *Bunches*, large, shouldered on both sides; *berries*, very large, roundish inclining to oval, brownish purple, becoming purplish black when fully ripe; of sugary rich flavor.

Wilmot's New Black Hamburgh is similar, fruit larger, bloom very thick, flesh firm, nearly or quite equal to the common Hamburgh.

Allen's seedling Black Hamburgh, is of less value, bunches not as large, berries, black, oval. Victoria, heretofore regarded as a synonym of the old Hamburgh, is now regarded as a slightly improved sub-variety.

Black Prince.

Alicant,	Black Spanish,
Black Valentia	Black Portugal,
Boston,	Sir A. Pytche's Black,
Pocock's Damascus,	Cambridge Botanic Garden,
Steward's Black Prince,	Black Lisbon.

This often succeeds well, with winter protection out doors, while in the house it is esteemed on account of hanging long after fully ripe. A profuse bearer. *Bunches*, long, often shouldered; *berries*, large, thinly set, oval; *skin*, rather thick, black, covered with blue bloom; flavor sweet, excellent; "very good."

Black St. Peter's differs from this in having a thin skin.

Black Frontignan.

Muscat Noir,	Sir Wm. Rowley's Black,
Muscat Noir Ordinaire,	Purple Frontignan,
Black Frontignac,	Purple Constantia,
Bourdal.s des Hautes Pyrénee's	Muscat Moir de Jura.

This is the variety from which the muscadine wine is made. A good bearer. *Bunches*, long; *berries*, medium size, round, black; *skin*, thin; *flavor*, musky rich.

Black Cluster.

Black Morillon,	Early Black,
True Burgundy,	Pineau,
Small Black Cluster,	Black Burgundy,

Black Orleans.

This variety is hardy and succeeds outdoors. It is valued in

* A vine of this variety at Hampton Court Palace, planted in 1769, is stated to produce annually over one ton weight of fruit.

France for wine, but will never take high rank in this country. It has been pretty extensively disseminated throughout the west, which is our main reason for noting it. It has over forty synonyms, but those given are all which we have ever heard applied to it in this country. *Bunches*, small, compact; *berries*, medium size, roundish oval, black, juicy, sweet; "good;" distinguished from Miller's Burgundy, by absence of down on the leaf.

Early Black July.

July Grape,	Madeleine,
Madeleine Noir,	Raisin Précoce,
Morillon Hatif,	De St. Jean,
Burgunder,	August Traube,

Jacob's Straube.

The habit of ripening its fruit by the middle of August, or earlier, is its chief merit. *Foliage*, small, light green; *bunches*, small, compact; *berries*, small, round, black, with a blue bloom, a little acid and of indifferent flavor; "good."

Grizzly Frontignan.

Grizzly Frontignac,	Red Constantia,
Muscat Rouge,	Muscat Gris,

&c., &c., in all thirteen Synonyms.

Adapted only to the house, where it ripens early, and being of "*best*" quality is highly esteemed. *Bunches*, rather long, narrrow, slight shoulders; *berries*, round, medium size, grayish red, thick bloom, juicy, rich, musky, high flavor.

Royal Muscadine.

Chasselas de Fontainebleau,	Chasselas,
Golden Chasselas,	White Chasselas,
Chass-las Doré,	Chasselas Blanc,
D'Arbois,	Raisin d'Champagne,
Amiens,	Amber Muscadine,

Early White Teneriffe.

This is highly esteemed; is distinguished from White Sweet Water (often sold as this variety) by its larger berries and stronger growth. Grown out of doors, it requires not only winter protection, but also to be well supplied with wood ashes, as otherwise it cracks and mildews.

Allen says, the Royal Muscadine and Chasselas of Fontainebleau are distinct, but only in size of bunch. The Early White Muscadine, he also says, only varies from this in ripening a few days earlier.

Bunches large, long, shouldered; *berries* above medium, round, greenish-white, becoming amber color when fully ripe, tender, rich delicious flavor. Ripens middle to last of September.

Muscat of Alexandria.

White Muscat of Alexandria,
Jerusalem Muscat,
Malaga,
White Muscat of Lunel,
Lunel,
Frontniac of Alexandria,
Muscat d'Alexandria,
White Muscat,
Tottenham Park Muscat.
Passe-longue Musqué.

Passe Musqué.

Adapted only to house culture and even then benefitted by artificial heat.

This is probably the "Malaga" grape brought to this country in jars and sold by confectioners.

Bunches very large, loose, irregular; *berries* large, oval, pale amber, thick skin, firm flesh, crisp, musky, rich perfumed flavor, often seedless. A strong grower.

The Cannon Hall Muscat, is esteemed a sub-variety not equaling its parent.

Traminer.

Red Traminer,
Delaware,
Fromentin Rouge,
Rother Traminer,
Rother Klevner,
Tokayer,
Kleinbranner,
Rothclauser,
Ranfoliga,
Heath,
Gris Rouge,
Fromentean,
Decimanner,
Rothedel,
Rothfranken,
St. Clauser,
Marximmer,
Ran Folak,

Rothe Reifler.

This variety was exhibited at the Ohio State Pomological Convention in 1852, as the Heath or Delaware Grape, having been grown in Delaware, O., under these names. It was stated to have proved perfectly hardy in the open air, being free from mildew or rot, a productive bearer, and never failing to perfectly ripen both fruit and wood. Allen says of it "a much esteemed wine grape on the river Maine." It is described in the London Horticultural Society's Catalogue. It deserves a place in every garden.

Bunches, medium size, compact; *berries*, roundish oval, middle size, uniform, pale reddish, tender, juicy, sweet, without pulp, rich and pleasant flavor. Ripens ten days before Isabella.

White Frontignan.

White Frontniac,
Nepeans Constantia,
Raisin de Frontignan,
Moschata Bianca,
Moscatel Commun,
White Constantia,
Muscat Blanc,
Muscat Blanc de Jura,
Moscado Bianco,
Muscateller.

An old productive variety suited only to the house. *Bunches*, middle size, rather long, rarely shouldered; *berries*, middle size, round, rather closely set; *skin*, thin dull white or greenish yellow, thin white bloom; *flesh*, delicate, sugary, rich musky flavor.

NECTARINES.

The Nectarine is claimed to be only a sport in nature from the Peach, to which occasionally plants grown from seed return; record is also made of the Nectarine tree producing both Peaches and Nectarines on the same tree. Of this we confess some little unwillingness of belief; certain, however, it is that the trees so closely resemble the Peach, as not to be detected except when in fruit.

Grown under glass, or South, where the heat is greater than at the North, the Nectarine is a really fine fruit; but here, it is inferior to the Peach, possessing a flavor, partaking of the peculiar flavor and taste of the pit. When we say the trees are undistinguishable from the peach, we speak the general view; closely examined, the wood may be found slightly more smooth, and possibly a trifle firmer or closer grained. The trees are usually propagated by budding, in same manner and time as the peach, and their after culture is the same.

The fruit of the Nectarine being smooth skinned, is equally liable to attack from Curculio as the Plum, and the same remedies are adopted for prevention; we, therefore, refer the reader to the article under head of Insects injurious to the Plum. The same marks distinguishing varieties in the leaf are found in the Nectarine as in the Peach, and used accordingly.

CLASS I.—*Worthy General Cultivation.*

BOSTON.

Lewis, | Perkins' Seedling.

American. Claimed to have originated from a peach stone. It is probably one of the very best Nectarines and well adapted to all sections of our country.

Flowers, small; *glands*, globose; *fruit*, large, sometimes eight inches round, roundish oval; *skin*, light yellow, with deep red cheek, shaded off by a mottling of red; *flesh*, yellow to the stone, sweet, with a pleasant, peculiar flavor; *stone*, small, pointed. *Season*, first September. Freestone.

Downton.

Foreign. *Flowers*, small; *glands*, reniform; *fruit*, large, roundish oval; *skin*, pale green, with violet red cheek; *flesh*, pale green, melting, rich, high flavor. *Season*, last of August. Freestone.

Early Violet.

Violet Hative,	New Scarlet,
Petite Violet Hative,	Aromatic,
Early Brugnon,	Brugnon Hatif,
Brugnon red at Stone,	Violet Musk,
Hampton Court,	Violet red at Stone,
Large Scarlet,	Lord Selsey's Elruge.

Foreign. Tree, very hardy, often confounded with Elruge, from which it is distinguished by its deep red flesh and dark colored stone. *Flowers*, small; *glands*, reniform; *fruit*, large, roundish, narrowed at apex; *suture*, shallow; *skin*, yellowish green in shade, dark purplish red, mottled with pale brown dots, in sun; *flesh*, whitish, red at stone, melting, juicy, rich and high flavored; *stone*, roundish, reddish brown *Season*, last of August. Freestone.

Elruge.

Common Elruge,	Temple,
Claremont,	Oatland's
Anderson's	Spring Grove.

Foreign. An old variety that has always maintained a first character wherever correctly grown.

Flowers, small; *glands*, reniform; *fruit*, medium, roundish oval; *suture*, distinct only at apex; *skin*, pale greenish shade, violet or blood red, dotted with brown specks in sun; *flesh*, greenish, slightly stained with pale red at stone, juicy, rich, high flavor; *stone*, oval, rough. *Season*, early Sep. Freestone.

CLASS II.—*New and untested, suited to Amateur Pomologists or certain locations.*

Barker.

Foreign. "Flowers small, glands reniform. Fruit large obovate, dark red next sun, pale yellowish green where shaded; flesh fine, yellowish white, rayed with bright red at the stone; stone large, kernel bitter. August. Freestone." New, not yet fruited in this country.

Duke of Tellier's.

Duc du Tellier's,	Du de Tello,
Du Tilliers,	Duke de Tilley,
	Du Tilly's.

Foreign. Flowers small, glands reniform. Fruit above medium, roundish

oblong, pale green, purplish red cheek; flesh greenish white, red at stone, second rate flavor. Last August. Freestone.

Early Newington.

Early Back Newington, Lucombe's Black, | New Early Newington, Lucombe's Seedling, Early Black.

Foreign. Flowers large, glandless. Fruit large, roundish ovate, point at apex, pale green, with shades of red marbled in sun; flesh greenish white, red at stone. Early September. Clingstone.

French Yellow.

Foreign. Fruit medium, greenish yellow, dull red in sun; flesh yellow, juicy, rich. September. Clingstone. (W. R. P.)

Hunt's Tawny.

Hunt's Large Tawny, | Hunt's Early Tawny

Foreign. Flowers small, glandless. Fruit below medium, roundish ovate, point at apex, pale orange, red cheek, russety specks; flesh orange, juicy. Middle August. Freestone.

Hardwicke.

Hardwicke Seedling, | Hardwicke's Seedling.

Foreign. Flowers small, glands reniform. Fruit large, roundish oval, pale green, violet red cheek; flesh pale green, little marked with red at stone, juicy. Last August. Freestone.

Large Early Violet.

Violette Grosse.

Foreign. Similar to Early Violet, a trifle larger, and less high flavored.

Neate's White.

New White, Cowdray White, | Flanders, Emerton's New White, Large White.

Foreign. Flowers large, glands reniform. Fruit above medium, round, white reddish cheek in the sun; flesh white. juicy. Early September. Freestone.

Orange.

Pitmaston's Orange, | William's Orange, William's Seedling.

Foreign. Flowers large, glands globose. Fruit large roundish ovate, acute point at apex, orange yellow with dark brownish red cheek; flesh yellow, red at stone, juicy, sweet. Last August. Freestone.

Red Roman.

Old Roman, Roman, | Brugnon Violet Musquée, Brugnon Musquée.

Foreign. An old variety which proves best adapted to our northern sections. Flowers large, glandsreniform. Fruit above medium, roundish, greenish yellow, with dull red cheek, and russety specks; flesh firm, greenish yellow, deep red at stone, juicy, vinous. Early September. Clingstone.

Stanwicke.

As yet we do not know of this variety having fruited in this country, but from its high praise in England, where it originated, and the fact of our clear, sunny clime adding to the richness and sugary character of both Peach and Nectarine, as compared with England, we are led to suppose this will prove the very best Nectarine extant.

It was grown from a stone brought from Syria, and is described in the journal of the London Horticultural Society as above medium size, roundish oval, slightly heart shape at base; pale greenish white, shaded into deep, rich violet in sun; flesh, white, tender, juicy, rich, sugary, and without the slightest trace of prussic acid flavor; stone, middle size, ovate, a prominent sharp edge, rugged, and of chocolate color; kernel, sweet.

CLASS III.—*Unworthy farther Culture.*

Broomfield.

American. Glands,reniform; fruit, large, roundish; dull yellow, red cheek; flesh, yellow, pleasant; second rate. Middle September. Clingstone.

Fairchild's.

Fairchild's Early.

Foreign. Glands,reniform; fruit, small, round; yellowish green, red cheek; flesh, yellow, dry, poor. Early August. Freestone.

Golden.

Orange, | Fine Gold Fleshed.

Foreign. Glands,reniform; fruit, medium, roundish ovate; light yellow, red in sun; flesh, orange yellow, firm, sweet; second rate. Early September. Clingstone.

Murrey.

Murry, | Black Murry.

Foreign. Glands,reniform; fruit, medium, roundish ovate; pale green, red

cheek; flesh, greenish white, sweet, good flavor; poor bearer. Last August. Freestone.

Newington.

Scarlet Newington,	French Newington,
Scarlet,	Sion Hill,
Old Newington,	Rough Roman,
Smith's Newington,	Anderson's Round.

Foreign. Glandless; fruit, large, roundish; greenish yellow, red in sun; flesh, firm, juicy, deep red at stone. Middle September. Clingstone.

Princes Golden.

American. Glands, reniform; about one-fourth larger and a week later; otherwise, of second quality, and resembling the "Golden."

Peterborough.

Late Green, | Vermash,
Gen'a or Genoese.

Foreign. Under the last synonym it has, of late, been disseminated as new. Glands, reniform; fruit, small, roundish; green, with dull red in sun; flesh, greenish white, juicy. Early October. Freestone.

Sweet Yellow.

Janne Lisse, | Late Yellow.

Foreign. Glands, reniform; fruit, small; yellow, with dull red cheek in sun; flesh, yellow, dry. October. Freestone.

THE PEACH.

Persica vulgaris, Dec. *Rosacea* of Botanists.

Found wild on the Himalayan mountains, and not mentioned by Jewish history, it is doubtful whether the Peach is, as generally understood, a native of Persia and also of China. It was, however, introduced into Italy by the Romans, and, as early as 1550, was cultivated in Britain. About the year 1680 it was introduced into this country, and, with the exception of portions of the northern New England States and northern New York, it is now cultivated in every settled portion of our States. History clothes the peach with having once possessed deleterious qualities, and Pliny mentions that it was supposed the King of Persia had sent them into Egypt to poison the inhabitants, with whom he was then at war. This, however, with traditions, making the fruit of a Peach tree, when eaten, to confer immortality, knowledge, and the like, are now regarded as mysticisms of a past age, of which, nought but the tradition is left. In portions of China, Spain, Italy, and the South of France, as well as our own country, the Peach is grown without aid of glass, or artificial, or condensed heat, by means of walls, etc.; we have therefore looked to receive some variety from thence that would surpass our American Seedlings, but, as yet, none have been introduced.

The wood of the Peach, being of a more open, coarse fibre than that of most fruits, we find it more susceptible to sudden and severe changes of temperature, and therefore less hardy, and of shorter duration. That this character is materially affected by soil, seems not to admit of a doubt; writers generally conceding that while in unfavorable soils the Peach decays in four to ten years, in favorable soils it continues healthy and vigorous for forty or fifty years, and, with the addition of being annually, correctly and freely pruned, may be made to produce regularly for near one hundred years. Of this we speak more at length under the head of Soil.

Propagation.—By Seed. The seed of the Peach, if carefully planted in the autumn, will often vegetate in the ensuing spring, and, in good soil, make a growth the first year of three to four feet; but in order to succeed surely, it is best to gather the stones from late fruiting varieties, of hardy, healthy trees; spread them about four inches thick on some light, sandy knoll and cover with about four inches earth. In spring, when the frost is fully out of the ground, leaving it fit for working, these stones will be found to have

mostly cracked and the germ just started; they should then be carefully planted in rows, four feet apart, and one seed every foot in the row, covered about two inches deep. The stones that are not cracked by the frost should be taken and carefully cracked, by placing on a wooden block and striking the *side edge* with a hammer; this will not injure the germ, as is often done when they are cracked by striking the *ends*. Separated from the stone, the kernels should be planted same as above, but in rows by themselves, as all are not sure to grow, and, even if they did, would not as soon as those already started, and therefore the rows in culture would often have trees unfitted for budding at same time; or frequently those coming from the last named kinds would be entirely too small for budding the first year.

It is well to know that most of the yellow fleshed Peaches have a tendency to produce varieties similar to the parent; hence the innumerable new sorts that now swell the nursery-men's catalogues, and that are yearly being introduced to the public as "*highly superior*." If an orchard is desired to be produced of seedlings, by selecting seeds of the Yellow Rareripe, Crawford's Early, Bergen's Yellow, Lemon Cling, and Crawford's Late, it is very probable a collection would be obtained preserving in great measure the characters, qualities, and times of ripening of these varieties. So, also, may the periods of ripening of each kind be, to a certain extent, hastened or retarded, by selecting pits of the first or last that ripen on each particular tree.

The grower should, however, recollect that while there is a strong tendency in these varieties to reproduce themselves, their capability so to do is often destroyed by the intermixture, while in flower of some other variety which is perhaps adjoining them only a few feet; hence, in order to feel any degree of certainty toward the raising of kinds valuable, or resembling the parent, it is necessary that the tree from which the pits are taken should stand perfectly isolated, or certainly distant two hundred rods from any other Peach tree.

Those who have not the dry sandy knoll whereon to place the pits, to prepare them for the ensuing spring, may place them in a moist cellar until nearly the close of winter; then take them out, soak them in water two or three days, spread them on the ground and cover two or three inches of saw-dust or leaf mould over them; thus exposing them to action of frost until the season for planting.

By Budding.—The seed sown as above will, early in the month of September, be found to have grown, in good soil, from three to four feet, when they should be budded as near the ground as possible; and in October one-half of the entire top should be cut back—not the limbs pruned off, leaving bare stems—but the growth of every limb should be shortened or cut back one half; this is to pre-

vent injury from high winds or heavy snows, which frequently break the tree, just at the insertion of the bud.

Some bud upon the plum stock, for the purpose of dwarfing the tree; and when so done the month of August is best. The exact time cannot be stated, as seasons vary even in the same section of country, but the watchful eye will soon learn to detect the period when the young stock is about to form its terminal bud, and then is generally the best time. If the bud is inserted too early in the season, on the Peach stock, it is liable to overgrow and "gum."

Budding the Peach may also be performed in the month of June, on trees of two or more years old. It is done in same manner as that in common budding, except in selecting the buds, you select a young shoot, of about one to two inches grown, and, cutting it back to one or two leaves, you insert and tie as in the common mode.

By Grafting.—This is rarely performed at the North, but may be made tolerably successful if performed very early on trees standing in warm, light soil. A strong, sharp knife or spade should first be used around, cutting off all the roots of the tree, at about one foot from the body of a tree four feet high—the tree headed back about one half, and the lower limbs cut into about two buds each—the graft inserted in the manner termed tongue or whip-grafting, tied with soft bark, and covered with a ball of grafting-clay. When the graft has made one foot growth, the ligature should be loosed, and the lower limbs cut in smoothly to the body. Some cultivators in the southern States graft into the crown of the root, and when the stocks are small it is a good way; but the cleft grafting mode is then best.

Transplanting.—In transplanting from the nursery to the orchard, the limbs, or branches, should be shortened back to the form of a pyramidal, rounded head, having the lower limbs within two feet of the ground, and not exceeding one foot long. The side roots should only have their ends smoothed with a sharp knife, all broken or bruised roots cut away, and the tap root cut off to within one foot of the crown.

Distances apart.—On light, sandy soils, twelve feet apart each way is sufficient for the peach; but on good strong soil, the trees require from eighteen to twenty-five feet, in order, when full grown, to enable them to mature their fruit with full exposure to the sun.

Soil and Situation.—The soil whereon to make plantations of the peach is a matter of great import, as thereby hang the main chances of success or failure. The following analysis, made by B. Kirtland, Esq., of Poland, Ohio, from three esteemed varieties, viz., Yellow Rareripe, Morris Red Rareripe, and Morrisania, will be found extremely useful to every planter, as it is easy to get an analysis made of soils, and from the two the planter will know at once which par

ticular manure is required to perfect his fruit, and give vigor to his trees. Equal quantities of limbs and twigs from the three kinds above named, were taken, and after having been thoroughly dried (whereby they lost about 44 per cent. of water), carefully burned with a moderate heat, yielding as follows:

Charcoal and Sand,	3.180
Silica,	1.480
Perphosphate of Iron,	2.174
Potash,	12.545
Soda,	2.000
Sulphate of Lime,	2.258
Lime,	23.951
Phosphate of Lime,	21.699
Magnesia,	7.052
Peroxide of Manganese,	.800
Chloride of Sodium,	.699
Carbonic Acid,	33.350
	111.188
Loss in Analysis,	3.812
	115.000

These analyses show the wood of the Peach tree as next to the Pear in amount of Phosphates, and also the erroneous impression so generally current, that the Peach requires a light, sandy soil. The most vigorous, healthy trees we have ever seen are growing on the borders of the Ohio River, on what is termed limestone soil, and where perfect drainage is naturally formed by the hills. On the prairies the trees grow rapidly, but to us have the appearance of a forced, green-house plant, and unable to endure aught but genial air, while feeding thus upon one or two of the elements of growth, and at the same time devoid of others requisite to the perfection of healthy wood. Lime and bone dust, we judge, will be found especially beneficial in perfecting truly healthy trees, capable of enduring the great changes of climate on our western prairies. If to this application be added the practice of shortening in during the month of September, and perfect drainage of water from the roots, we believe the tree will be found to endure more successfully the extreme changes of climate.

The duration of the Peach tree we consider greatly dependent upon the soil being properly drained, and containing the proper proportions of food toward forming perfect wood. The doctrine of excretions of vegetables, is one which we are yet inclined to support, having been unable to succeed, even with renewed preparation of the

soil, in growing two successive crops of the same kind of tree upon the same plot.

A rank, luxuriant tree, with shoots spongy, sappy, plethoric, unripened, and incapable of being matured, with the roots in an undrained, cold, or wet soil, is too often regarded as thrifty, when in truth it is but the expression of a false stimulant, as in the human frame, exciting only to destroy.

The situation of a peach-orchard should, if possible, be upon high grounds, as less subject to extreme and severe changes of temperature, and as tending to more perfect maturity of wood in fall of year, and later period of blooming in spring. If the trees are low-branched and well shortened in, supplied with requisite inorganic elements in the soil, the lay of the land to the east, south, or north will only affect the time of ripening the fruit: that to the south maturing about one week earlier than that toward the north. Elevated situations, surrounded by, or bordering on, bodies of water, will often furnish fruits when adjacent valleys fail; and this is especially true where the bodies of water do not entirely freeze over during winter: the southern shores of several of our lakes rarely failing to produce peaches when the entire crop is destroyed five or ten miles back in the interior. Even slight knolls often protect the crop, an instance of which we had in our own grounds, where trees were distant only thirty feet; in one night all of the buds upon the lower limbs, or more than half way up, being destroyed on the tree standing on what would be termed the level, while on the tree on the knoll not one was injured.

The destruction of buds by extreme cold in the winter is of rare occurrence, except the tree has been excited by a season of warm weather, or has been grown in the manner called "thrifty," previously noted. Where trees are steadily and healthily grown, they are capable of wishstanding 20° to 25° below zero without injury, unless immediately followed by clear, warm sun, or the tree being in an immature, unhealthy state.

Season to Transplant.—Throughout the northern and western States it is best to transplant the Peach in the spring. South or Southwest, fall or midwinter may be best—but from remarks of many writers, we incline to the belief, that early in March or the last of February is best, as they occasionally have some severe changes in January, very trying to newly planted trees. The ground should alway be prepared in the fall.

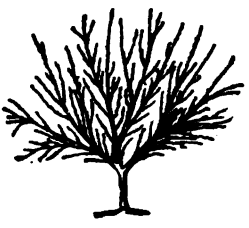
Cultivation.—The ground about peach trees should always be kept clean; if planted on light, sandy soil, running through an orchard with a cultivator so as not to break the roots; if upon rich prairie or limestone soils, the ground may be plowed and cropped without injury; but on the sandy, light soil no crop except the white

turnip should ever be grown, and that pays best to be turned under by a very shallow plowing of, say, two inches deep. On rich, deep prairie soils, it is best not to stir the ground after midsummer.

Pruning.—The fruit being borne only on wood of the preceding year, one of the great objects in pruning, is to keep all parts of the tree furnished with a regular and constant succession of annual bearing shoots. P. Barry, in his "Fruit Garden," has the following, so correctly descriptive of the mode, that we adopt it, together with a cut illustrative of buds, on which *C. D. E.* are fruit buds, *F. G. H.* leaf buds, *I.* double buds, *C.* triple buds; the two side buds being fruit buds, and the centre one a leaf bud. By referring to the branch, it will be seen that it is furnished with a certain number of wood buds and fruit buds. At the base, there are always one or more wood buds.

Now, if that shoot were not pruned, all the fruit buds on it would produce fruit,—one, two, or three of the wood buds at the top would make new shoots; these would necessarily be very weak, in consequence of the number of fruit below them. At the end of the season there would be a long, vacant space, entirely destitute of a young shoot or a living bud. This is the way that the interior and lower parts of trees become so soon degarnished.

But when that shoot is shortened, we will say one half, the sap is retained in its lower parts, one half of the fruit buds are removed, and the consequence is, that large and fine fruits are obtained from those remaining; young vigorous shoots are produced from the lower buds to bear next year, and take the place of those which have already borne. In this way regular uniform crops of large and fine fruit are obtained, and a constant succession of young shoots is kept up.



Form of a low standard peach tree, with a stem two feet high, and a round, open head.

To form the head of a standard Peach Tree. — We will suppose it the intention to form a standard tree, with a trunk two feet in height, and a round, open, and symmetrical head, like figure. We take a yearling tree and cut it back to within two feet and a half of the

ground in the spring. Below this cut a certain number of shoots will be produced, from which three will be selected to form the main branches or frame-work of the head. All the others are rubbed off when two or three inches long or sooner. At the end of the season we have a tree with three branches.

The *second year* these three branches are cut back full one half their length, and from each we take a shoot to continue the branch, and one to form a secondary branch. The other shoots produced below these are pinched or checked to prevent them from interfering with the growth of the leading branches. In the fall of the year we have a tree with six leading branches, and some bearing shoots below on the older wood.

The *third year* each of these six branches is shortened one half, in order to obtain more secondary branches, and some fruit branches on the lower parts. All young shoots on the old wood, whether fruit branches or not, should be cut back one half, or as far as may be necessary, to cause the wood buds at their base to push, and make shoots to bear next year.

The formation of the head goes on as described for two or three years more, when it is complete; for peach trees, properly pruned, do not assume such wide spreading forms as they do naturally. The main branches and secondary branches should be at equal distances throughout, and far enough apart to give the bearing wood on their sides the full benefit of the sun and air.

An equality of vigor should also be preserved amongst them by summer pinching. It is not uncommon to see a very vigorous shoot start up in a peach tree, and appropriate so much of the sap as to injure a whole branch; these should be checked the moment their character is observed, unless they may be wanted to fill a vacancy. Every part of the branches should be furnished with bearing shoots, and these should, every spring, be shortened in one half or more, to produce others at their base, whilst those that have borne are cut out."

With the advice above, as well as of most writers, to shorten back or prune the Peach in the *Spring*, we do not fully agree; believing, rather, that if the operation be performed in September, it will enable the tree to more fully perfect the remaining buds, and fit it to endure changes of temperature during winter.

Diseases and Insects injurious. The Curl of the Leaf. The first developed leaves, in the spring, often become diseased with a spongy and malignant growth, exhibiting reddish blotches or swellings on the upper side, that, after two or three weeks, causes them to fall off. "This occurs at a period when the vigorous circulation of the sap requires a corresponding action in those important organs. A second growth is soon forced out, which ultimately restores the tree to its wonted force and vigor. It is, however, evident, that though the recuperative

powers of nature may, for once, twice, or even thrice, restore a growth of leaves, the shock must at length impair the vitality, and induce an unhealthy condition." This curl of the leaf is produced by the punctures of a small plant-louse, the "*Aphis persica*," fully described by Dr. Harris in his work on Insects.

A mixture of tobacco water and strong soapsuds applied with a syringe, early, or as soon as the leaves are one third grown, will be found a good remedy. Barry regards the curl of the leaf induced by sudden change of weather—a number of warm days that cause the expansion of the young leaves, followed by a cold, rainy day; the more severe and protracted the cold, the more severe and fatal the curl.

The Yellows. What is regarded as the Yellows is little known throughout the West; neither have we ever observed it, to any extent, in the New England States, except where trees were procured from, or grown on poor, sandy soils, enfeebled and imperfect from their first start. That it may be perpetuated by innoculation, or sowing seeds from trees diseased, we have no doubt; it therefore behooves every tree grower to be careful from whence he procures his pits for stocks. Prof. Kirtland says: "It is questionable whether any distinct disease occurs, to which this name is applicable. Perhaps it is only a collection of symptoms arising from causes acting either individually or collectively. Facts seem to favor this view, though the insight of popular opinion is in favor of its being a specific and contagious disease." Depredations of the *Ægeria exitiosa*, *Aphis persica*, exhaustion of elements in the soil, and want of correct pruning appear to be the primary causes, and, in reference thereto, Prof. Kirtland further remarks: "In estimating the power and extent of these causes, it should be recollected that an injurious impression, acting constantly upon successive generations of either animal or vegetable species, may ultimately establish a hereditary entailment that may be propagated in the form of predisposition to disease, or disease itself. The converse is equally true in producing health or physical development.

These several causes have been exerting their influence on the Peach tree for a long term of years, impairing the stamina and health of its fruit germs. These impressions have been propagated and re-propagated, in conjunction with the action of the primary causes of impairment, till at length we have only a sickly progeny."

The remedy is to cut down and destroy all diseased trees; the preventive is judicious cultivation.

Mildew. This is the name applied to a minute fungus which attacks the ends of the young branches of some particular varieties, termed serrated or glandless. It checks growth, and renders the

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English) is the most natural and well understood; next, the distinction by means of what are termed *glands* on the leaves, as also the indentations or irregular edge of the leaf termed crenеate, serrated, and coarsely serrated; and last the distinction by means of the flowers, as large or small. This last is open only to examination a short period, and therefore is not used except by the careful amateur pomologist, or correct nurseryman.

The accompanying figures are illustrative:

Fig. 1. Fig. 2. Fig. 3.

Figure 1, the serrated without glands; figure 2, coarsely serrated, and with globose glands; figure 3, crenеate and with reniform or kidney shaped glands. "The form of the glands," observes Lindley, "as well as their position, is perfectly distinct; they are fully developed in the month of May, and continue to the last permanent in their character, and are not affected by cultivation. The globose glands are situated, one, two, or more, on the foot stalks, and one, two, or more, on the tips or points of the serratures of the leaves. The reniform glands grow also on the footstalks of the leaves, but those on the leaves are placed within the serratures, connecting, as it were, the upper and lower teeth of the serratures together; their leaves, when taken from a branch of vigorous growth, have more glands than the leaves of the globose varieties. It will, however, sometimes happen, that glands are not discernable on some of the leaves, especially on those produced from weak branches; in this case, other branches must be sought for which do produce them." Lindley, as well as most writers since, have rendered these classes, with sub-classes or divisions, founded mainly on the structure of the leaves, but we have preferred, in this fruit as well as others, to embody the distinction in the text descriptive of a variety, and confine ourself to the practical every day wanted division of "best," "very good," and "good." The word "Melocoton" only meaning "peach," we have dropped, and only use it in connection with the synonyms.

Uses.—The various uses made of the peach are so well known as not to require a word, yet the profit to be obtained from drying or preserving fresh, the fruit, when distant from market, induces us to

extract the following descriptions. Downing says, "in Western New York, and indeed in most parts of the country where peaches are largely cultivated, the fruit is dried, and in this state sent to market in very large quantities. The drying is performed, on a small scale, in spent ovens; on a large scale, in a small drying house heated by a stove, and fitted up with ventilated drawers. These drawers, the bottoms of which are formed of laths, or narrow strips sufficiently open to allow the air to circulate through them, are filled with peaches in halves. They are cut in two without being peeled, the stone taken out, and the two halves placed in a single layer with the skin downward. In a short time the heat of the drying house will complete the drying, and the drawers are then ready for a second filling. Farther south they are spread upon boards or frames, and dried in the sun merely; but usually, with the previous preparation, of dipping the peaches (in baskets,) for a few minutes in boiling water before halving them."

Prescrving the fresh fruit.—Thomas describes the process as follows: "Prepare the canisters in the best manner, of good tin—about seven or eight inches in length, and four to four and a half in diameter. Whatever be the size, they should be uniform, that they may be heated alike. The fruit selected should be just ripe and no more, free from specks or bruises. When the canisters are filled, the tops are to be carefully soldered on, leaving a hole in them about the size of a small pin for the escape of the air. They are then to be set in a vessel of water, to be kept boiling moderately, until the temperature of the fruit is raised to that of the water. The way in which this is ascertained, is to put a drop of water on the pin hole, which will continue to bubble as long as the air escapes from the canister. When the internal temperature is equal to that of the water, no more air will escape. The water is then to be wiped off, and a drop of solder immediately put in its place. The boiling water should be raised as near to the tops of the canisters as possible, so as not to cover them. If the operation has been properly conducted, the ends of the canisters will, shortly after the cooling has taken place, be depressed, in consequence of the external pressure of the atmosphere. The degree of heat to which the fruit is subjected does not cook it in the least. It is proper that the canisters should be set in a cool place. The vessel in which the water is to be kept boiling, must of coarse have a level bottom; and every one who is disposed to try the experiment can devise one for himself."

VARIETIES.

The varieties of the peach have within a few years been largely increased, but as the fruit is, when matured, quickly perishable, we have endeavored to select out only those that are really valuable, and that will furnish a perfect succession from earliest to latest. Many varieties are undoubtedly good in their immediate locality, and often perhaps equal the best, yet there seems no necessity for increasing the numbers unless some evident superiority is found either in fruit or tree.

The periods of ripening, which we have attached to each variety, mark its character on the southern shore of Lake Erie, in northern Ohio. At Cincinnati it will often be found two weeks earlier, while at Boston or Buffalo it will be eight or ten days later.

CLASS I.—*Worthy General Cultivation.*

BERGEN.

Bergen's Yellow.

American. It much resembles Yellow Rareripe, but ripens about ten days later; a moderate regular bearer. *Flowers*, small; *glands*, reniform; *fruit*, large, globular; depressed, broad *suture*, distinct, rather more than half round; *skin*, deep orange, with a broad red cheek; *flesh*, yellow, melting, and of luscious flavor. *Season*, early September. Freestone.

BREVOORT.

Brevoort's Morris. | Brevoort's Seedling Melter

American. A moderate but regular bearer. *Flowers*, small; *glands*, reniform; *fruit*, medium to large, round; rather broad distinct, *suture*; deep at apex; *skin*, dingy, white, with a bright red cheek; *flesh*, firm, slightly red at stone, sweet and high flavored. *Season*, early September. Freestone.

CRAWFORD'S EARLY.

Crawford's Early Melocoton, | Early Crawford.

American. As a market fruit, one of the most deservingly popular of the yellow fleshed varieties; productive. *Flowers.*

small; *glands*, globose; *fruit*, large, oblong, oval, sometimes roundish, point at apex prominent; *suture*, shallow; *skin*, yellow, with red cheek; *flesh*, yellow, juicy, and when ripened in warm sunny weather, rich and sweet, at other times slightly sub-acid. *Season*, last of August to 10th of September. Freestone.

Crawford's Late.

Crawford's Late Melocoton, | Crawford's Superb Melocoton.
Crawford's Superb Malacatune.

American. One of the most valuable yellow fleshed late varieties, deserving place in all collections; productive. *Flowers*, small; *glands*, globose; *fruit*, large, roundish; *suture*, shallow; *skin*, yellow, with dark red cheek; *flesh*, yellow, red at the stone, juicy, vinous, and like the foregoing, depends on warm sunny weather to make it sweet. *Season*, last of September and first of October. Freestone.

Cooledge's Favorite.

Cooledge's Early Red Rfreripe.

American. *Tree* very hardy and productive. *Flowers*, small; *glands*, globose; *fruit*, medium to large, roundish, largest on one side; *suture*, at apex only; *skin*, white, with a bright red cheek often mottled; *flesh*, melting, juicy, rich, with a sweet delicious flavor. *Season*, 20th to last of August. Freestone.

Columbia.

American. *Tree*, moderate grower, hardy, young wood a pur plish cast, moderate regular bearer. *Flowers*, small; *glands*, reniform; *fruit*, large, roundish, with a shallow suture half round; *skin*, singularly marked and striped with dark red; *flesh*, yellow, often exhibiting a red streak next the skin, rich, juicy, and excellent flavor. *Season*, middle to last of September. Freestone.

Early York.

Serrate Early York, | True Early York.

Much confusion has arisen with growers respecting this peach owing to the same name having been applied to seedlings in New Jersey. *Tree*, hardy, productive, and, from the period of ripening, one of the very best. *Flowers*, large; *leaves*, serrated without glands; *fruit*, medium, roundish, oval; *suture*, slight; *skin*, with pale red dotted on greenish-white in the shade, and becoming dark red where exposed to the sun; *flesh*, greenish-white, tender, melting, full of rich sprightly juice. *Season*, middle of August. Freestone.

Early Newington.

Early Newington Freestone, | Newington,
Smith's Newington.

Foreign. This variety ripens directly after the forenamed. *Tree* hardy, moderately productive; *flowers*, small; *glands*, reniform; *fruit*, large, roundish, one-half always largest; *suture*, distinct; *skin*, yellowish white, dotted and streaked with red, the cheek a rich red; *flesh*, white, red at the stone, to which many particles adhere; (if not fully ripe, it has the habit of a cling;) juicy, rich, vinous flavor. *Season*, 20th to last of August.

George the Fourth.

American. *Tree*, vigorous, hardy, regular, good bearer; *flowers*, small; *glands*, globose; *fruit*, above medium; *suture*, broad and deep, making one half larger than the other; *skin*, yellowish white dotted with bright red, on one side a rich dark red cheek; *flesh*, pale red at the stone, melting, juicy, rich, luscious flavor. *Season*, last of August. Freestone.

Grosse Mignonne.

Royal Kensington,
Grimwood's Royal George,
" New Royal George,
Large French Mignonne,
French Mignonne,
Swiss Mignonne,
Purple Avant,
Early Purple Avant,
Early May,
Early Vineyard,
Vineuse,
Neil's Early Purple,
Johnson's Early Purple,
Superb Royal,
Royal Sovereign,
Ronald's Seedling Galande,
Pourprée Hative,
Belle Beauté,
Pourprée de Normandie,
Vineuse de Fromentin,
Mignonne,
Early Purple.

Foreign. The Grosse Mignonne or Large Favorite was a favorite peach in France in time of Louis XIV., and is everywhere esteemed, although in this country it is seldom that the true variety is cultivated. The true variety has *large* flowers, while that often grown has *small* flowers.

Flowers, large; *glands*, globose; *fruit*, large, roundish, apex depressed, with a deep, hollow suture; *skin*, dull greenish yellow, mottled with red, and with a purplish red cheek; *flesh*, yellowish white, marked with red at the stone, juicy, melting, rich, high, vinous flavor; *stone*, small, very rough. *Season*, about 20th August to 1st September. Freestone.

Heath.

Heath Clingstone,
White Heath,
Fine Heath,
Red Heath.

American. This variety is extremely valuable in the middle, and southern and western States. In the northern States it does not

always ripen well, but the fruit may be gathered, wrapped in paper same as oranges, and laid in a cool room and kept until Christmas. It often reproduces itself from the stone, and Bayne's New Heath partakes of no new qualities over many other of its seedlings. The trees are very hardy, often producing on our western soils when all others fail.

Flowers, small; *glands*, reniform; *fruit*, large, oblong, narrowing to both ends, with a swollen point at apex; *suture*, one side, distinct; *skin*, downy, cream colored white, a tinge of red in the sun; *flesh*, greenish white, adhering closely to the stone, juicy, rich, luscious flavor. *Season*, October. Clingstone.

Hyslop.

Hyslop's Clingstone.

American. This variety should take the place of Heath in all northern localities, and, indeed, deserves a place in every garden, however small. From not finding it noticed in any work since Kenrick's issue, we had supposed it probably a synonym, but have been unable so to detect it. *Trees* are hardy, vigorous and productive; *flowers*, small; *glands*, reniform; *fruit*, large, oblong, roundish; *skin*, white, with a deep rich, red cheek; *flesh*, very juicy, melting, rich and luscious. *Season*, early in October. Clingstone.

Jaques.

Jaquish, | Jaques Rareripe,
Jaques Rareripe.

American. A very desirable market variety; good flavor; and very certain bearer.

Flowers, small; *glands*, reniform; *fruit*, large, roundish; distinct suture; *skin*, downy, dull yellow, with red cheek; *flesh*, yellow, red at the stone, juicy, rich, slightly sub-acid. *Season*, middle of September. Freestone.

Morris Red.

Morris Red Rareripe, | Red Rareripe,
Large Red Rareripe.

American. Has been confounded with George the Fourth, and also with Grosse Mignon, from both of which it is distinct. The Large Early York of N. Jersey most nearly resembles it, but is quite different. It is universally esteemed. *Trees*, vigorous and productive; *flowers*, small; *glands*, globose; *fruit*, large, roundish; slightly depressed at apex; *suture*, well marked; *skin*, greenish white, with a lively red cheek; *flesh*, greenish white, red at the stone, melting, juicy, rich, sweet flavor. *Season*, last of August. Freestone.

Morris White.

Morris White Rareripe,
White Rareripe,
Luscious White Rareripe,
Lady Ann Steward,
White Malacaton,
Cole's White Malacaton,
Freestone Heath,
Morris White Freestone,
Philadelphia Freestone.

American. This Variety is most suited to the southern and south-western States, where it is a most delicious fruit; but grown at the north, it is one of the most valuable for preserving in brandy, and always commands a high price therefor. *Tree*, vigorous, moderate bearer; *flowers*, small; *glands*, reniform; *fruit*, large, oval; *suture*, moderate, swollen point small; *skin*, downy, greenish white, becoming a creamy white when fully ripe, rarely a purplish tinged cheek; *flesh*, white to the stone, moderately firm, sweet and rich. *Season*, middle of September. Freestone.

Malta.

Pêche Malte,
Malte de Normandie,
Italian,
Belle de Paris.

Foreign. The true Malta is less known than a spurious sort having globose glands, which is most generally grown. The true Malta is a delicious fruit for the private garden, but not desirable for marketing; *flowers*, large; *leaves*, serrated, without glands; *fruit*, above medium, roundish, flattened, with a broad, shallow suture on one side; *skin*, pale, dull green, marked on the sunny side with broken spots and blotches of dull purple; *flesh*, greenish, with a little dark red at the stone, very juicy and melting, rich, vinous, delicious flavor. *Season*, last of August. Freestone.

Late Admirable.

Royale,
La Royale,
Pêche Royale,
Bourdine,
Boudin,
Narbonne,
Téton de Venus,
French Bourdine,
Judd's Melting,
Motteux's,
Pourprée Tardive.

Foreign. An old variety, the trees of which have proved successful wherever grown. Moderate, regular bearer. *Flowers*, small; *glands*, globose; *fruit*, large, roundish, inclining to oval; *suture*, bold, apparently making two halves of the fruit—a swollen point at apex; *skin*, yellowish green, with a cheek of two shades of red, mingled, or marbled; *flesh*, greenish white, juicy, melting, delicate, delicious flavor. *Season*, about 20th September. Freestone. We have often seen the foregoing named fruit, the Malta, under the name.

Lemon Clingstone.

Kennedy's Carolina, | Largest Lemon,
Kennedy's Lemon Clingstone, | Pine Apple Clingstone,
Long Yellow Pine Apple, | Yellow Pine Apple.

American. The flavor of this variety, except grown in warm climate and good soil, would not place it among the first class; but the uniform hardihood and productiveness of the tree, together with the fine appearance of the fruit, making it very desirable for marketing purposes, has induced us to retain it. *Flowers*, small; *glands*, reniform; *fruit*, large, oblong, with a projecting point at apex like unto a lemon; *skin*, fine yellow, with a dark brownish red cheek, becoming sometimes, in certain locations South, almost a crimson red; *flesh*, firm, yellow, tinged with red at stone, juicy, sprightly, vinous, sub-acid flavor. *Season*, middle to last of September. Clingstone. The "Yellow Blanton Cling" is only a sub-variety, ripening a few days later.

New York Rareripe.

Livingston's New York Rareripe, | Honest John,
Large Early York, | Haine's Early Red,
Early York of New Jersey.

American. The synonyms which we attach to this variety, we are aware, are questioned by some good pomologists, but after having grown and examined the trees under the several names, we confess ourselves unable to distinguish any material difference, certainly not sufficient to make distinct descriptions requisite. *Trees*, vigorous, healthy, moderate but good bearers; *flowers*, small; *glands*, globose; *fruit*, above medium, roundish; *skin*, whitish, with marblings and dots of red, with a clear, rich, red cheek, where exposed to the sun; *flesh*, almost white, fine-grained, very juicy, rich, mild, excellent flavor. *Season*, last of August. Freestone.

Nivette.

White Rareripe, | Velouté Tardive,
Nivette Velouté, | Dorsetshire.

Foreign. An old variety, which succeeds most admirably throughout all Northern sections, and, where known, equally well South. *Trees*, upright, healthy growth, regular bearers; *flowers*, small; *glands*, globose; *fruit*, large, roundish, inclining to oval; *suture*, shallow, point or apex slightly depressed; *skin*, yellowish green, and, when exposed to sun, a bright, lively, red cheek; *flesh*, greenish white, tinged with reddish pink at the stone, juicy, melting, with a rich, delicious flavor. *Season*, early in September. Freestone.

Oldmixon.

Oldmixon Cling, | Oldmixon Clingstone.

American. Of the clingstone peaches we think this and Hyslop's the best, and deserving place in every collection. *Flowers*, small; *glands*, globose; *fruit*, large, roundish oval; *suture*, well marked, and one side of fruit slightly larger than the other, without *mamelon*, or swollen point; *skin*, yellowish white, with red more or less dotted, and becoming bright red cheek where exposed fully to sun; *flesh*, pale white, juicy, rich, high and excellent flavor. *Season*, early in September. Clingstone.

Oldmixon Freestone.

Oldmixon Clearstone.

American. Said to have been produced from seed of the Oldmixon, which we think somewhat doubtful. It is, however, a variety meriting place every where, as it always produces a crop, appearing to withstand late spring frosts better than many others, and for market, its ripening just at a period when most other varieties are out, makes it extremely desirable. *Flowers*, small; *glands*, globose; *fruit*, large, roundish, slightly oval, one side swollen; *suture*, apparent only at apex; *skin*, a mingling of yellowish white and pale green, more or less marbled with dull red, and having a deep red cheek in the sun; *flesh*, white, tinged with red at stone, rich, sweet, vinous, excellent flavor. *Season*, 5th to 15th September.

President.

American. *Trees*, healthy, productive, similar to the Rareripes; a valuable market fruit; *flowers*, small; *glands*, globose; *fruit*, large or above medium, roundish oval; *suture*, shallow; *skin*, downy, pale yellowish green, with a red cheek; *flesh*, white, red at the stone, juicy, sweet, rich, high flavor; *stone*, rough, and unless fully ripe, the flesh adheres slightly to it. *Season*, middle of September. Freestone.

Prince's Red Rareripe.

Late Red Rareripe.

American. *Trees*, vigorous, productive, and fruit of a grayish appearance, distinguishing it from all other varieties; *flowers*, small; *glands*, globose; *fruit*, large, roundish oval, with a depressed suture and sunken point at apex; *skin*, downy, pale grayish yellow, mottled and marbled with red, and with a red cheek mottled with fawn-colored specks; *flesh*, white, deep red at stone, juicy, melting, rich, luscious flavor. *Season*, early in September. Freestone.

Rosebank.

American. Originated with James Dougall, Esq., C. W. *Trees*, healthy, moderate, but regular bearers; *Leaf*, serrated without glands; *fruit*, above medium, round, compressed at the apex; *suture*, deep, extending somewhat more than half way round; *skin*, whitish yellow with a red cheek, where fully exposed to the sun, the red becomes almost purple; *flesh*, thick, whitish yellow, very little red about the stone, juicy, rich, excellent flavor. *Season*, middle of September. Freestone.

Tillotson.

Early Tillotson.

American. This variety requires a strong soil, otherwise it is liable to mildew. The trees are hardy, but not good bearers while young, nor are they rapid growers. Its period of maturity must, however, give it place for market purposes as being the earliest good fruit yet known. For small gardens where only three or four days are little consequence, it is not advisable to plant it. *Flowers*, small; *leaves*, glandless, serrated; *fruit*, medium, roundish; *skin*, nearly white, dotted with red and becoming dark red in the sun; *flesh*, whitish, red at the stone, to which the flesh partially adheres, juicy, rich, high flavor. *Season*, variable, we having fruited it as early as 29th July and again not until 10th of August, but always, however, a few days before Early York; and we only note this here in order to show that no certain dates will answer from year to year in any fruit.

Van Zandt's Superb.

Waxen Rareripe.

American. A variety not suited to market purposes, but highly desirable in small gardens for dessert use. *Flowers*, small; *glands*, globose, obscure; *fruit*, medium, roundish, one side enlarged; *suture*, distinct but not deep; *skin*, white, beautifully sprinkled and marbled with clear red, cheek red, dotted with carmine; *flesh*, whitish, tinged with red at the stone, juicy, sweet, very fine flavor. *Season*, early in September.

Walter's Early.

American. A popular orchard variety, adapted to light soils. *Trees*, healthy and productive; *flowers*, small; *glands*, globose; *fruit*, above medium, globular, flattened; *skin*, white, with a rich red cheek; *flesh*, whitish, tinged with red at the stone, juicy, sweet, fine flavor. *Season*, last of August. Freestone.

White Imperial.

American. A valuable variety for the northern parts of our

country, being hardy and vigorous, and a regular, moderate bearer. South, the trees grow too rapid, while the fruit is insipid. It seems to do equally well in sandy or loamy soil, but in the former will probably sooner require some specific stimulant. *Flowers*, small; *glands*, globose; *fruit*, large or above medium, roundish, broad, depressed at apex; *suture*, not deep, but well marked, and the fruit often one side enlarged; *skin*, yellowish white, tinged or marbled with light purplish red towards the sun; *flesh*, nearly white, melting, juicy, sweet, delicate, delicious flavor. *Season*, last of August. Freestone.

Ward's Freestone.

Ward's Late Free, | Ward's Free

American. We have examined this variety for several years, and were we to have but one late-ripening variety, should unhesitatingly select this. The Weld's Freestone spoken of by Mr. Manning, in the second volume of the Horticulturist, we strongly suspect to be this variety. It is a variety highly successful among orchardists in Delaware, and so far as we have seen, equally valuable at the North. *Trees*, vigorous, healthy, not too rapid growth; *flowers*, small; *glands*, ———; *fruit*, above medium, roundish; *skin*, yellowish white, with a red cheek where exposed to the sun; *flesh*, nearly white, rarely tinged with red at the stone, juicy, vinous, and, for a late peach, sweet and delicious flavor; for late preserving it is invaluable. *Season*, early October. Freestone.

Yellow Rareripe.

Yellow Red Rareripe, | Marie Antoinette,
Large Yellow Rareripe, | French Rareripe.

American. As a market or garden variety, this has no equal among yellow-fleshed fruits. Cultivators should, however, be careful of the correctness of their trees, as an old sort, far inferior, and often known under name of Yellow Malacatune, is frequently grown for this variety. *Flowers*, small; *glands*, globose; *fruit*, large, roundish; *suture*, shallow, extending rather more than half round, a small point at apex; *skin*, deep orange yellow, dotted somewhat with red, the cheek rich red, shaded off in streaks; *flesh*, deep yellow, red at the stone, juicy, melting, rich, vinous, nearly first-rate flavor. *Season*, 20th to last August. Freestone.

CLASS II.—*New and untested; adapted to certain locations, or gardens of Amateurs.*

Alberge.

Yellow Alberge,	French Rareripe,
Alberge Jaune,	Peche Jaune,
Purple Alberge,	Gold-Fleshed,
Red Alberge,	Yellow Rareripe of some
Golden Mignonne,	Hardy Galande,

Golden Rareripe.

Foreign. Flowers, small; glands, globose; fruit, medium, roundish yellow, purplish cheek; flesh, yellow, red at stone. Middle Aug. Freestone.

Allen.

American. Small, roundish; white, red cheek; juicy. Freestone. Middle Sept. (Cole.)

Atwater.

American. Closely resembles President, and may prove identical.

Bellegarde.

Early Royal George,	Violette Hative Grosse,
Red Magdalen,	Brentford Mignonne,
French Royal George,	Ronald's Mignonne,
Smooth-leaved Royal George,	Large Violet,
Violette Hative,	arly Galande.

Foreign. Flowers, small; glands, globose; fruit, large, round, with a point; suture shallow, yellowish green; red cheek; flesh, little red at stone; juicy. Freestone. Early September.

Barnard.

Early Barnard, | Yellow Barnard.

American. Much resembles Alberge.

Bachelder.

American. Large; round, white, with deep blush; flesh, white, juicy. Freestone. Middle September. (Cole.)

Briggs.

American. Large, roundish; whitish, red cheek; flesh, white, red at stone; sweet. Freestone. Early September. (Cole.)

Blood Clingstone.

Claret Clingstone, | Blood Cling.

American. Valuable only for pickling and preserving; flowers, small; glands, reniform; fruit, often measuring twelve inches round; suture, dis-

tinct, skin, downy, dark, clouded, purplish red; flesh, deep red throughout; firm, juicy. Last September

The old French Blood Clingstone is a smaller fruit than the above, and also has large flowers. The Blood Freestone is a variety of above, medium size, glandless leaves, and less valuable.

Bullard's Clingstone.

American. Large, round; white, with red cheek; juicy, fine. September. (Kenrick.)

Bullard's Seedling

American. Large, round, pale yellow and red. Middle of September. Freestone. (Kenrick.)

Cable's Late.

Cable's Late Melocoton.

American. A seedling of the old Red Cheek, and resembles Crawford's Late, only ripening some six days earlier. Freestone.

Cole's Early Red.

American. Productive; flowers, small; glands, globose; fruit, medium, roundish, pale yellow, mostly covered with red, often dry. Last August. Freestone.

Chinese Peach.

Flat Peach of China, Peen To Java Peach.

Foreign. Glands, reniform; flowers, large; fruit, small, flattened, long, yellowish green, and pale red; skin, thin; flesh, pale yellow, red at stone, to which it adheres, juicy, delicate, vinous flavor; fitted only for the amateur's garden. September; July, at the South.

Clinton.

American. Only suited for marketing; flowers, large; glands, globose; fruit, large, roundish, yellowish white with red cheek, juicy. Last of August. Freestone.

Cambridge Belle.

Hovey's Cambridge Belle.

American. Large, roundish, white with a blush, red cheek, juicy, good. Early September. Freestone. (Hovey.)

Clarke.

American. Large, roundish, yellow, red blush; flesh, yellow, red at stone, juicy, sugary, fine. Early September. (Cole.)

Down Easter.

Hall's Down Easter.

American. Large, roundish, deep suture, yellow, broad red cheek; good, hardy, productive. 20th September. (Cole.)

Double Montagne

Double Mountain, | Montagne Montauban.

Foreign. Almost worthy a place in first class; flowers, large; leaves, glandless; fruit, medium, roundish, pale greenish white, with two shades of red when exposed to the sun; flesh, white, delicate, juicy, fine. Last of August. Freestone.

Elmira.

American. This variety originated in Miss. by M. W. Phillips, Esq. We have not seen it, nor a description, but it is spoken of as a Clingstone, ripening a few days earlier than Early Tillotson, and being very desirable in that section.

Eliza.

American. Originated at Philadelphia; glands, reniform; fruit, large, round, terminating in a nipple; skin, yellow, with mottled red cheek; flesh, yellow, red at stone. Last of September. Freestone. (W. D. B., in Pomologist.)

Eastburn.

Eastburn's Choice.

American. Large, roundish, pale yellow, with red on the sunnyside; flesh, yellowish, red near the stem, juicy, sprightly. Last of September. Freestone.

Fulkerson.

Fulkerson's Early.

American. Leaves, glandless; specimens of the Fulkerson Peach were sent us 20th of August, 1851, by its originator, R. P. Fulkerson, Ashland, O., from which we made our description. Mr. Fulkerson states it hardy and productive when Yellow Rareripe, Tillotson and other varieties fail; fruit, medium; obtuse, rounded, sides irregular, unequal; suture, half-round; skin, whitish, rich, red cheek; flesh, whitish yellow, tinged with red at the pit, juicy, rich, sweet and high flavored; stone small, angular, flattened. Freestone. 20th August.

Green Catherine.

Doctor Cooper.

Probably Foreign. Flowers, small; glands, globose; fruit, large, round, pale green, with red cheek; flesh, bright red at stone, tender, juicy; very fine South, inferior at the North. First to middle September. Freestone.

Green Rareripe.

American. Flowers, small; glands, globose. We have not seen it. Manning says: medium size, productive, fine flavor. Middle September. Freestone.

Galande.

Hardy Galande.

Foreign. Received from France by Messrs. Parsons & Co., Flushing, L. I., who describe it thus: Flowers, small; glands, globose; fruit, below medium; suture, deep; skin, downy, dark blood color on one side, on opposite, red and yellow marbled; flesh, yellow, red at stone, juicy, rich, apricot flavor. Last August. Freestone.

Hastings.

American. Flowers, small; glands, globose; fruit, above medium, round, slightly flattened; yellowish white, with a purplish red cheek; juicy, delicious. Early September. Freestone. (Manning.)

Hartshorn.

American. Large, roundish oval, yellow, deep blush; flesh, coarse; keeps long. Middle September. Clingstone. (Cole.)

Hale.

Hale's Mélocoton.

American. Above medium, oblong, flat at base; suture, slight; yellow; flesh, yellow, rich, sweet. Early September. Freestone. (Cole.)

Hatch.

American. Very large, roundish pointed; suture, shallow; deep yellow, blush in sun; flesh, yellow, melting, sweet. Early September. Freestone. (Cole.)

Henry Clay.

American. Newly introduced by A. B. Lawrence, Woodville, Miss., by whom it is thus described: Glands, reniform; fruit, very large, deep purple in sun, shading to bright pink and creamy white; flesh, grayish white, tender, peculiar flavor, partaking of strawberry and pineapple; small stone, parting freely from the flesh. First August. September at the North.

Kenrick's Heath.

Heath Freestone, | Heath Free.

American. Flowers, small; glands, reniform; fruit, large, oblong, swollen point at apex; suture, slight; greenish white, purplish red cheek; flesh, greenish white, red at stone, coarse, juicy, sub-acid. September.

Jose Sweet.

American. Flowers, small; glands, globose; fruit, medium, roundish, broad; suture, deep; greenish white, dull red cheek, juicy, delicious flavor. Last September. Freestone.

Jones' Early.

American. Glands, globose; fruit, medium, roundish, yellowish white, with pale red in sun; flesh, yellowish white, red at stone, juicy. Middle August. Freestone. (Hovey.)

Jones' Large Early.

American. Glands, reniform; fruit, large, roundish flattened; suture, deep; greenish white with crimson cheek; flesh, white, melting, pink at stone. Middle August. Freestone. (Hovey.)

Incomparable.

Pavie Admirable, | Late Admirable Cling.

Foreign. Valuable only for market. Trees, healthy, productive; flowers, small; glands, reniform; fruit, large, roundish, swelling a little on one side, yellowish white, with red cheek; flesh yellowish white, red at stone, juicy. Late September. Clingstone.

Monstrous Clingstone.

Pavie de Pompone, | Pavie Monstrueux,
Monstrous Pompone, | Pavie Rouge de Pompone,
Monstrous Pavie, | Pavie Camu,
Pavie de Pomponne Grosse, | Gros Mélocoton,
Gros Persique Rouge.

Foreign. A variety which succeeds finely in rich, deep soils, often of very fine flavor, but apt to be deficient. Its very large size makes it sell readily. Flowers, large; glands, reniform; fruit, very large, roundish oval, swollen point at apex, obtuse; suture, marked half round; skin, yellowish white, with red mostly overspreading it; flesh, firm, yellowish white, deep red at stone, juicy. Last October. Clingstone.

Madeira.

Hill's Madeira, | Madeira Freestone.

American. A variety now little known, and, we think, never much out of southern Ohio. Fruit, large, roundish; suture, well marked, not deep; yellow, with rich red cheek; flesh, yellowish, rather firm, rich, and, in warm seasons, sugary and delicious. Early September. Freestone.

Merriam.

American. Glands, globose; large, oval, light yellow, red cheek; flesh, yellow, red at stone, juicy, sweet. Last September. Freestone. (Cole.)

Mrs. Poinsett.

American. Origin in South Carolina. Glands, globose; fruit, large,

globular; suture, distinct, regular; skin, brownish yellow, veined with red; flesh, yellowish, juicy, partially clingstone. First September.

Moore's Favorite.

American. Glands, globose; fruit, large, roundish, white, bright blush; flesh, white, juicy, vinous. Early September. Freestone. (Cole.)

Malden.

Early Malden.

American. Flowers, small; leaves, glandless. A variety originated by Jas. Dougall, Esq., of C. W., and, as yet, not fully tested. Fruit, medium, roundish compressed, one side enlarged; suture, distinct; skin, white, with reddish blush cheek; flesh, white, juicy, sprightly. Last August. Freestone.

Lincoln

American. Glands, globose; fruit, large, roundish; broad suture; downy, yellow, with purplish red; flesh, yellow, red at stone, juicy, sweet. Early September. Freestone. (Cole.)

Noblesse.

Vanguard, | Mellishe's Favorite
Lord Montague's Noblesse.

Foreign. The "Double Montagne" is said by some to be identical with this old variety. We have fruited them two years, but the Double Montagne under unfavorable circumstances, so that we are, as yet, unwilling to place them as identical, although their identity is not improbable. Flowers, large; leaves, glandless; fruit, above medium, roundish oblong, pale greenish white, with two shades of red where exposed to sun; flesh, greenish white, melting, juicy. Last of August. Freestone.

Newman.

American. Large, round, greenish white, with a blush; flesh, white, juicy, sweet. Middle September. Freestone. (Cole.)

Orchard Queen.

Reine des Vergers.

Foreign. New—comes with high praise; should be tested. Tree, vigorous; new shoots, reddish; glands, reniform; fruit, large, oval, depressed at apex; skin, yellow, purplish red in sun; flesh, yellowish white, red at stone, melting, vinous. September. Freestone.

Orange Clingstone.

American. Flowers, small, serrated, glandless; fruit, large, round; suture, well marked; deep orange, occasionally a dark red cheek; flesh, yellow, firm, juicy, vinous. Middle September. Clingstone.

Owen.

Owen's Lemon, | Owen's Lemon Rareripe.

American. Glands, globose; fruit, large, roundish; suture, distinct; yellow, purplish red in sun; flesh, yellow, red at stone, juicy, sweet. Middle September. Freestone.

Paragon.

Prince's Paragon.

American. Flowers, large; glands, globose; fruit, large, roundish oval; yellowish green, with red cheek; suture, shallow, terminating in a point at apex; flesh, white, red at stone, juicy, sweet, rich. Middle September. Freestone.

Poinsett.

American; originated in South Carolina. Glandless; fruit, large, roundish oval; ruddy yellow; flesh, firm, juicy. September. Clingstone.

Poole's Yellow.

Poole's Large Yellow, | Poole's Late Yellow Freestone.

American. Glands, reniform; fruit, large, roundish; suture, half round; deep yellow, dark red cheek; flesh, yellow, red at stone, rich, juicy. Last of September. Freestone.

Snow.

American; only suited to sunny exposures, and rich, deep, warm soils. Flowers, small; glands, reniform; fruit, medium, round; suture, slight; skin, thin; clear white; flesh, white, juicy. Early September. Freestone. The blossoms of this variety are white, and the wood is a light green.

Shanghai.

From north of China. Flowers, large; leaves, creneated; glands, reniform; fruit, large, roundish; pale yellow in shade, crimson red in sun; flesh, pale yellow, deep red at the stone, to which it partially adheres. (Jour. L. H. Society.)

Sites' Old Zack.

A variety esteemed at Columbus, Ohio, where it originated. Fruit, above medium; yellow, with dull red cheek; flesh, yellow, juicy, separating freely from the stone. 1st to 15th September.

Skinner's Superb.

A freestone yellow peach, originated at the South, where it ripens early in August, and is regarded as "very good."

Saint George.

Smock, | Smock Free.

American; valuable market sort. Glands, reniform; fruit, large, oval, compressed sides; orange yellow, red in sun; flesh, bright yellow, red at stone, juicy, rich. Last September. Freestone.

Smith's Favorite.

American. Glands, reniform; fruit, large, roundish; deep suture; yellow, red in sun; flesh, yellow, juicy, sweet. Middle September. Freestone.

Red Cheek.

Red Cheek Melocoton, | Malagatune,
Hogg's Melocoton, | Malacatune,
Yellow Melocoton, | Lady Gallatin,
Yellow Malagatune.

American. Flowers, small; glands, globose. The parent of most of the recently introduced yellow peaches. Fruit, large, roundish oval; swollen point at apex; yellow, deep red cheek; flesh, yellow, red at stone, juicy, a little sub-acid. Early September. Freestone.

Red Rareripe.

Large Red Rareripe, | Douglass,
Early Red Rareripe, | Burgess' Beauty.

American. Flowers, small; leaves, glandless; fruit, large, round; suture broad; skin, white, mottled with red, becoming quite red in sun; flesh, whitish, red at stone, melting, juicy, sweet. Last August. Freestone. Sometimes mildews. From this variety it is probable most of our rareripes have been produced.

Rodman's Red.

American. Flowers, small; glands, reniform; fruit, large, oblong; mostly red in sun; flesh, whitish, firm, juicy. Last of September. Clingstone.

Reeves' Favorite.

American. Distinct from "Favorite" of Coxe. Flowers, small; glands, globose; fruit, large, roundish; yellow, with red in sun; flesh, yellow, juicy, sometimes a little acid. Early September. Freestone.

Tippecanoe.

American. Flowers, small; glands, reniform; fruit, large, roundish, yellow, red in sun; flesh, yellow, juicy, sprightly. Middle to last September. Clingstone.

There is also a Freestone variety under this name, which originated in Ohio. It is, however, rarely grown, and we know of no description, nor have we seen the fruit.

Tuft's Early.

American. Glands, globose; large, roundish; yellowish white, red cheek; flesh, white, red at stone, juicy, sweet. Last of August. Freestone.

Tarbell.

American. Large, roundish, flattened at base; suture, nearly round; yellow, mostly covered with red; flesh, yellow, red at stone, juicy, sweet. Middle September. Freestone. (Cole.)

Tuft's Rareripe.

American. Glands, globose; medium, roundish; red and yellow; flesh, yellow, sweet. Middle September. Freestone. (Cole.)

Weld's Freestone.

American. Flowers, small; glands, reniform; fruit, large, roundish oval; greenish white, with some red. First to middle October. (Manning.) We are inclined to regard this as probably identical with Ward's Freestone.

Washington.

Washington Rareripe, | Washington Red Freestone.

American. Flowers, small; glands, globose; fruit, large, broad, depressed; suture, broad, deep, nearly round; skin, yellowish white, with crimson cheek; flesh, yellowish white, tender, juicy, sweet, rich. Middle September. Freestone, but often adheres slightly.

White Clingstone.

Large White Clingstone, Williamson's New York, | New York White Clingstone, Selby's Cling.

American. The quality of the variety would place it in the first class, but in selecting of two, we think the Oldmixon preferable; and as they ripen at same time, we have placed this variety as only suited to large orchards.

Flowers, small; glands, globose; fruit, large, round; small swollen point at apex; suture, shallow; skin, yellowish white, little covered or dotted with red where exposed to sun; flesh, whitish, tender, melting, juicy, sweet, high flavor. Early September.

Washington Clingstone.

American. Requires a warm climate and good soil. Valuable South, not at the North. Flowers, small; glands, reniform; fruit, medium, roundish; yellowish green, with gray specks and a tinge of red in sun; juicy, tender, and rich, sweet flavor. Last September.

Walburton.

Walburton Admirable.

Foreign. Leaves, glandless, serrated; fruit, above medium, roundish oblong; greenish white, with red cheek; flesh, greenish white, melting, and separating freely from the stone. Late September.

CLASS III.—*Unworthy farther culture.*

Acton Scott.

Foreign. Glands, globose; fruit, medium, yellowish white, red cheek, flat, pale white, often bitter. August.

Astor.

American. Glands, globose; fruit, above medium, yellowish white, red cheek, deficient in flavor. Last of August.

Anne.

Early Anne, | Green Nutmeg.

Foreign. Glandless; fruit, small, greenish white, poor flavor. Early August.

Admirable.

Early Admirable, | L'Admirable, Belle de Vitry.

Foreign. Glands, globose; fruit, medium, yellowish white, red cheek; flesh, red at stone. August.

Almond.

Foreign. Glandless; fruit small, light yellow, red cheek; flesh, red at stone. September.

Belle de Vitry.

Admirable Tardive, | Bellis.

Foreign. Glandless; fruit, medium, yellowish white, red cheek; flesh, firm, red at stone. Last September.

Belle de Beaucaire.

Beauty of Beaucaire.

Foreign. Glands, globose; fruit, medium, greenish yellow, red cheek, juicy August. Freestone.

Beauty of Salisbury.

Foreign. Trees mildew; fruit, large, roundish, yellowish white, red cheek, juicy. September. Freestone.

Baltimore Beauty.

American. Glands, globose; fruit, medium, roundish, yellowish white, red cheek. August. Freestone.

Barrington.

Buckingham Mignonne, | Colonel Ausleys.

Foreign. Glands, globose; fruit, large, roundish, whitish yellow and red. flesh, tinged red at stone. September. Freestone.

Bennett's Rareripe.

American. Glands, globose; fruit, large, whitish yellow and red, deficient in flavor. August.

Belle Chevreuse.

Foreign. Glands, reniform; fruit, medium oval, greenish white, with red cheek; flesh, white, red at stone. September. Freestone.

Belzar's Early Rareripe.

American. Glands, globose; fruit, medium round, red in sun; flesh, streaked with red. August.

Chilian.

American. Glands ———; fruit, medium, yellowish white, red cheek, deficient in flavor. September. Freestone.

Canary.

American. Fruit medium, canary color; flesh, yellow, not colored at stone, to which it adheres closely. September.

Cable's Medium Melocoton.

American. Glands, globose; fruit, large, yellow and red; flesh, yellow; sub-acid. September.

Cable's Early.

Cable's Early Melocoton.

American. Glands, globose; fruit, large, yellow and red; flesh, yellow, sub-acid. September.

Congress.

Congress Cling.

American. Glands, reniform; fruit, large, whitish, with red, juicy; poor bearer. September.

Chancellor.

Chanceliere, Late Chancellor, | Noisette, Stewart's Late Galande, Edgar's Late Melting.

Foreign. Glands, reniform; fruit, large, oval, yellowish white, crimson cheek; flesh, red next stone. September. Freestone.

Carey's Mammoth Cling.

American. Glands, globose; fruit, little above medium, oval; flesh, white. September.

Charlotte.

Old Royal Charlotte, Grimwood's Royal Charlotte, | New Royal Charlotte, Kew's Early Purple.

Foreign. Glandless; fruit, above medium, ovate, greenish white, red cheek; flesh, white, red at stone. September.

Catharine.

Catherine Cling.

Foreign. Glands, reniform; fruit, large, roundish, oval, one side enlarged, yellowish green, red in sun; flesh, firm, yellowish white, red at stone. September.

Druid Hill.

American. Glands, globose; fruit, large, roundish, greenish white, red in the sun; flesh, greenish white, juicy, far inferior to Ward's Freestone. September. Freestone.

Emperor of Russia.

Cut Leaved, Serrated, | ● New Cut Leaved, Unique.

American. Mildews badly; glandless; fruit, medium, roundish, yellowish white, red cheek; flesh, firm, yellowish white. August. Freestone.

Early Robinson Crusoe.

American. Glands, globose; fruit, large, round, whitish, with red in sun. September.

Favorite.

Favorite Red.

American. Glands, globose; fruit, above medium, oval, white, with much red in sun; flesh, firm, red at stone. September.

Fox's Seedling.

American. Glands, globose; fruit, round, white, with red cheek. September. Freestone.

Gest's Superb.

Gest's large Freestone.

American. Glands, globose; fruit, large, roundish, yellowish white and red; flesh, firm, sub-acid. September.

Golden Ball.

American. Glands, globose; fruit, large, roundish, orange yellow, with red cheek; flesh, yellow, pink at stone, juicy, but not equal to Bergen's Yellow, with which it ripens. Early September.

Ispahan.

Pecher d'Ispahan.

Foreign. Glandless; fruit, small, round, whitish green; flesh, greenish white, a little sub-acid. September.

Hoffner.

Hoffner's Seedling.

American. Glands, globose; fruit, medium or above, roundish, whitish, with red in sun; flesh, yellowish white. August. Freestone.

La Grange.

American. Glands, reniform; fruit, large, oblong, greenish white, little red in sun; flesh, greenish white, juicy, not equal to many others at same time ripening. September. Freestone.

Late Yellow Alberge.

October Yellow, | Algiers Yellow,
Algiers Winter.

Foreign. Glands, reniform; fruit, medium, roundish oval yellow when ripe; flesh, firm, yellow, dry October.

La Fayette Clingstone.

American. Fruit, large, oval, yellow, red cheek; flesh, yellow, poor. September.

La Fayette.

American. Fruit, above medium, round, whitish, crimson in the sun; flesh, stained with red. September.

Nonpareil.

Scott's Nonpareil.

American. Glands, globose. Fruit, large roundish, oblong, yellow, with red cheek, too much like Crawford's Late, to be continued. Freestone. September.

Old Newington.

Newington Cling, | Newington,
Large Newington.

Foreign; glandless; fruit, large, roundish, yellowish white with red cheek; flesh, pale yellowish white, red at stone; juicy. September.

Pfleiger.

American; fruit, large, yellow, juicy, good flavor, poor bearer. Freestone. September.

Melting.

Large Melting.

American. Glands, globose; fruit, large, whitish with red cheek, flesh, white, red at stone; poor bearer. September. Freestone.

Magistrate.

Majestrate.

American. Glands, reniform; fruit, large, greenish white, red cheek, flesh, juicy, not high flavor. September. Freestone.

Morrisania.

Morrisania Pound, | Hoffman's Pound,
Morrison's Pound.

American. Glands, globose; fruit, large, round, greenish white, dull red cheek; flesh, yellowish white; poor bearer. September.

Madeleine of Courson.

Madeleine de Courson, | French Magdalen,
Red Magdalen, | Madeleine Rouge,
True Red Magdalen, | Rouge Paysanne.

Foreign. Glandless; fruit medium, roundish, yellowish white, red cheek; flesh, white, red at stone. Last August.

Monstrous Freestone.

American. Glands, globose; fruit, large, round, pale yellow and red; flesh, yellowish white; poor bearer. September.

Strawberry.

Rose.

American. Glands, reniform; fruit, below medium, surface mostly red; flesh, whitish; too small. August. Freestone.

Red Nutmeg.

Brown Nutmeg, | Avant Rouge,
Early Red Nutmeg, | Red Avant.

Foreign. Glands, reniform; fruit, small, round, pale yellow, red cheek; flesh, yellowish, red at stone. Early August.

Royal George.

Early Royal George, | Lockyer's Mignonne,
New Royal George, | Griffin's Mignonne,
Millet's Mignonne, | Superb,
Red Magdaline.

Foreign. Mildews badly; glandless; fruit, medium, roundish, pale white, red dots and marbled red in sun; flesh, whitish red at stone. Last of August.

Rosanna.

Foreign. Glands, reniform; fruit, medium, yellow and purplish red; flesh, yellow, red at stone. September. Freestone.

Swalsh.

Double Swalsh, | Swalze.

Foreign. Glands, reniform; fruit, medium, ovate, yellow, red cheek; flesh, white, red at stone; poor bearer. September. Freestone.

Sweet Water.

Early Sweet Water, | Large American Nutmeg.

There are two varieties under this name; one with globose glands, and one glandless; neither as valuable as Tillotson.

Scott's Early Red.

American. Glands, globose; fruit, medium, roundish, much dashed with red; flesh, whitish, juicy. August. Freestone.

Smith's Newington.

Early Newington, | Smith's Early Newington.

Foreign. Glandless; fruit, medium, oval, pale yellow, streaked with purplish red in sun; flesh, firm, pale yellow, red at stone. August. Clingstone.

Smock Clingstone.

American. Large oblong, yellow and red; flesh, yellow, juicy, sub-acid. September.

Spring Grove.

Foreign. Glands, globose; fruit, medium, roundish, greenish yellow, red cheek; flesh, greenish-yellow. September. Freestone.

Sulhamstead.

Foreign. Glandless, mildews; fruit, large, roundish, pale yellow, red in sun; flesh, yellowish white, sweet. September.

Slocum's Early.

American. Glands, globose; fruit, large, yellow and red; flesh, yellow. August.

Siebolt.

American. Glands; fruit, above medium, greenish yellow with red cheek; flesh, yellowish white. Freestone. September.

Tice.

Tice's Red and Yellow.

American. Fruit, large, yellow, red in sun; flesh, yellow, juicy; poor bearer. September. Freestone.

Vandermark.

American. Fruit, large, roundish; flesh, acid. September. A clingstone.

White Nutmeg.

Early White Nutmeg, | Avant Blanche,
White Avant.

Foreign. Glandless; fruit, small, oval, greenish white; flesh white, to the stone. Early August.

White Blossom.

White Blossomed Incomparable, | Willow Peach,

American. Glands, reniform; fruit, above medium, oval, white; flesh, white to stone. September. Freestone.

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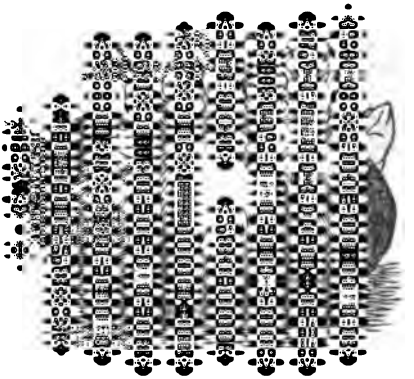

THE PEAR.

Pyrus communis, L. Rosacea of botanists.

NATIVE of Europe and Asia, the pear has long been cultivated, but not until within the past three centuries has there been any considerable number of sorts esteemed valuable as dessert fruits, except they were cooked. Of Van Mons, Knight, and others, and their exertions in originating and improving fruit, have we before written; and to their skill and care do we owe many of our best imported varieties; while, in this country, we are not the less indebted to such men as H. A. S. Dearborn, David Thomas, M. P. Wilder, J. P. Kirtland, W. D. Brinckle, and many others, for the importation, origin, and dissemination of the best varieties throughout the States.

Our pioneer settlers all planted seeds of the pear, as well as of the apple; and while in nearly all the middle portions of the States there are immense trees, healthy and vigorous as the native forests, few of these chance seedlings prove in fruit more than about one remove from the wild state. To this fact, and the erroneous impression that "he who plants pears, plants for his heirs," we attribute the neglect of fruit-growers, for years, to plant any considerable number of pear trees. Gradually, however, as facilities of traveling have increased, giving opportunity of comparing impressions with practice and results, and information become freely disseminated through our agricultural and horticultural journals, have pear plantations increased, until at this time there are, probably, yearly planted in the States not less than one million of trees.

In almost every State, there appear certain localities where the pear succeeds most perfectly, continuing to increase in size, vigor, and productiveness, from year to year. The following may be selected from many: Danvers in Mass., Hartford and East New Haven County, in Conn., Vincennes in Ia., Detroit in Mich., and north-western or central New York. And indeed we may find it difficult to name a section where, with the appropriate care in culture here pointed out, the pear may not be grown healthy and productive.

Propagation. By seed. The propagation of the pear by seed is the same as that of the apple, if we except the fact that, as the roots of the pear the first year are generally confined to the one "tap-root," as it is termed, and a few fibres, it is necessary that the soil be at least two feet deep. Old pasture ground or meadow trenched with the spade is the best for the growing of pear seedlings.

The propagating by *grafting*, *budding*, etc., is also the same in the pear as in the apple, and usually performed at same season. The remarks we make relative to root grafting on pieces of roots are also equally applicable to the pear as the apple. Some practise the grafting on pieces of root, and plant deep to induce the rooting of the pear from the graft; this is easily done, but we see no advantage; and our experience with trees, roots so formed, has not been favorable; we have found the roots thrown from the pear small and insufficient to sustain the tree, while those of the old root, on taking up, were diseased, apparently from some want of action in the circulation of sap-vessels.

Hardihood. The comparative hardihood of American over foreign varieties has been much lauded, but as yet we do not think sustained by experiment. Propagation on healthy or unhealthy stocks we think has had more to do with it than aught else. Until within a few years past, most of the pears worked on pear stocks in this country were on suckers, and this we imagine the foundation of most said respecting the comparative hardihood of native over foreign varieties.

Stocks and Adaptation of Trees grown thereon. Healthy seedling pear stocks, usually two years old and about $\frac{3}{8}$ to $\frac{1}{2}$ an inch diameter at crown, are regarded best for grafting on, while the same left to grow until August, are usually suitable size for budding. The quince, apple, thorn, and mountain ash, are all more or less used for growing what are termed dwarf trees. Of these the quince is best, thorn next, and apple the least desirable. Of the quince, seedlings are not desirable to use for this purpose, as they do not run even in growth; but cuttings grown from what is generally known as the Angiers variety should be procured. The thorn and mountain ash are used often with advantage on dry gravelly or sandy soils, where the quince roots do not appear as well suited.

While a very large number of varieties will take and grow for a year or two finely, there are comparatively few that succeed for a series of years in continued vigor and productiveness, when grown on any stock but that of the pear; and while the cultivation is now very extensive on the quince root, we cannot but fear that in eight-tenths it will prove unprofitable to the grower; and in the remaining two-tenths, require equally as much care in supplying nutrition and pruning, as a system of root pruning when grown on pear roots. There are, however, some sorts that the fruit seems improved by being worked on quince, as Duchess d'Angoulême, Easter Beurré, &c., and this is a strong item in favor of the quince stock; and therefore, while advising its use, we must not forget always to mention that without careful and high culture the grower will meet disappointment.

About one hundred years may be taken as the natural duration of the pear on pear roots, when grown in soil supplied with the elements necessary to sustain it; and about thirty or forty years the natural duration when worked on the quince root, and regularly pruned and cultivated. Instances are of course recorded and known, where trees exist for longer periods, while hundreds decay and are gone in one half the time. The demand for pear trees on the quince has been so great for some years past, that too often little regard has been paid to the stock; and we have now in our grounds rows of bearing trees on quince roots, all of one kind, received from France, from which, although receiving the same care and attention, there may be selected those that ere many years must of necessity decay, the stock and tree are not adapted one to the other. Again, as before remarked, there are varieties that, while they grow apparently well for a few years, decay on fruiting the second year. The success of the pear on quince roots trained en-pyramid in the old country has been confined to but few varieties, and these kept under a steady yet high state of cultivation. Orcharding with the pear on the quince, in the manner of most orcharding in this country, will never repay the first cost of the trees; but if trees are selected of varieties known to have been long successful, and a system of culture pursued which shall meet the requirements of the fibrous roots of the quince, then may the grower look for profit and pleasure in the result; but equally gratifying and profitable would be the result, if we except a few varieties of foreign origin, when grown on the pear, and annually root-pruned; added to which, if one half the trees were taken out after twenty years, the balance would form a fine permanent orchard to be managed as our apple orchards. In small gardens, where the quince stock is advised by nearly all writers, (and correctly so, if the right varieties are selected,) success will not be had without an appreciation by the grower of the extent of roots formed by the quince, and the system of culture required to supply the food of the plant, as well as knowledge in how to prune, and also some little knowledge of the amount of fruit the young tree is capable of ripening and continue in health; the tendency being rather to over-production and exhaustion.

Transplanting, Selection of Trees, and Distances apart.—The roots of the pear have few laterals except grown on shallow rich soil, and in transplanting, it is therefore requisite to secure as much of the large root as possible. If in taking up they are mostly destroyed, the branches will have to be shortened in and cut out. On the quince root, when well grown, there will need little attention, except to head back to a regular shape, and prune smooth the ends of each root, as often directed in this work; and in setting, taking

care that the earth is even with the junction of the pear on the quince.

Trees on pear roots for the orchard or garden are best at about three years old, and five to seven feet high, well grown and shaped as noted in the apple. Dwarf trees or those on quince roots, are best at one year from the bud; for, as a general thing, the nurseryman has neither the time, nor will the price paid for trees as compared with that of labor in this country, warrant him in a system of careful and correct pruning in nursery row; neither can a tree be so evenly shaped as when transplanted to more open and exposed positions.

The distance apart of pear or pear roots for large orchardin should be from twenty-five to thirty feet, while that of dwarfs gardens should be ten to fifteen feet. Dwarfs are now much planted intermediate in large permanent orchards, but as a whole, the practice is not to be advised, unless the grower intends to cultivate such orchard with care and attention, superior to the ordinary method of plowing, planting potatoes, &c.

Soil and Manures.—The pear roots thrive best in a soil where the sub-soil is at once dry and moist; that is, where it is open and porous sufficient to admit of free drainage, and yet where the roots, extending deeply and freely in it, reach moisture in season of extreme drought. Cold clay is a bad sub-soil, and where it exists in the ground of a prospective orchard, it should be deeply and thoroughly sub-soiled and well drained. The pear on quince roots succeed best in rich, deep, moist, loamy ground, even enduring considerable water better than dry sand. The following is the analysis of the ash of the pear as made by Dr. Emmons:—

	Sap wood.	Bark.
Potash,	22.25	6.20
Soda,	1.84	——
Chlorine,	0.31	1.70
Sulphuric Acid,	0.50	1.80
Phosphate of Lime,	27.22	6.50
Phosphate of Peroxide of Iron,	0.31	——
Carbonic Acid,	27.69	37.29
Lime,	12.64	30.36
Magnesia,	3.00	9.40
Silex,	0.30	0.40
Coal,	0.17	0.65
Organic Matter,	4.02	4.20
	100.25	98.30

From this it will be seen what most is wanted in the soil to produce healthy foliage and wood in the pear As a general thing,

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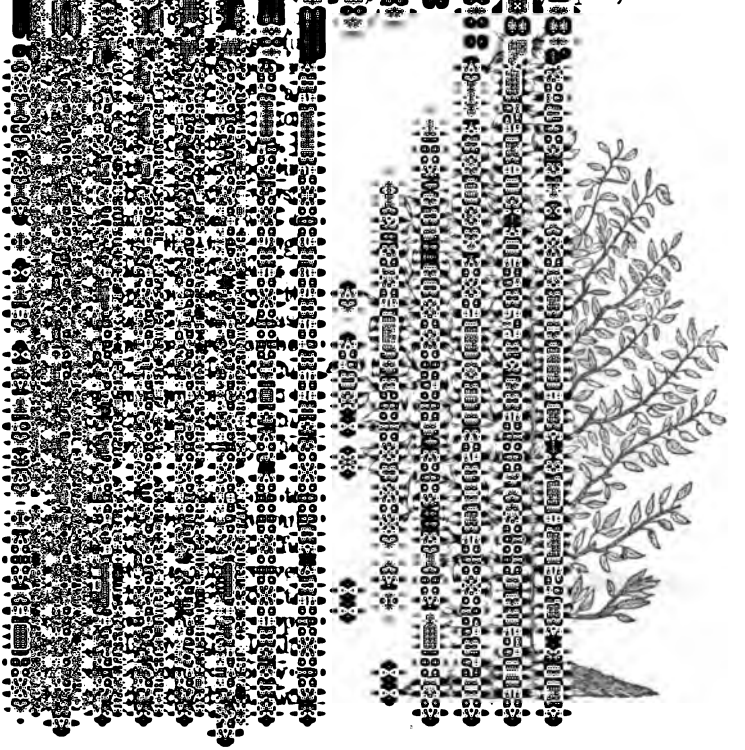


h to give uniform and trouble; it is ramid that is not e. A tree of this pe of the foregoing h as it ought to be dicular leaders are August: this short- e side shoots short- g shoot. Hooked nt to prune with. have been pinched

anting and after gement.—As before oned, the autum- and early winter hs are to be prefer- or planting; care d be taken in select- rees that are fur- ed with buds and ches from bottom p; but if a young ener intends to , and wishes to up his trees so they will become perfect in shape, he d select plants one old from the bud or ; these will, of se, have good buds n to the junction of graft with the stock. first spring, a tree s description should eaded down so as to e the shoot about 18 s long; if the soil is from five to six and n shoots will be pro- d; one of these be made the leader, f not inclined to be e. As soon in sum-

mer as the leading shoot is ten inches long, its end must be pinched off, and if it pushes forth two or more shoots, pinch all off but one to about two inches, leaving the topmost for a leader; the side shoots will in most cases assume a regular shape; if not, they may be this first season tied to slight stakes to make them grow in the proper direction. This is the best done by bringing down and fastening the end of each shoot, to a slight stake, so that an open pyramid may be formed; for if it is too close and cypress-like, enough air is not admitted to the fruit; they may remain unpruned till the end of August, when each shoot must be shortened to within eight buds of the stem;* this will leave the tree like the preceding figure, and no pruning in winter will be required.

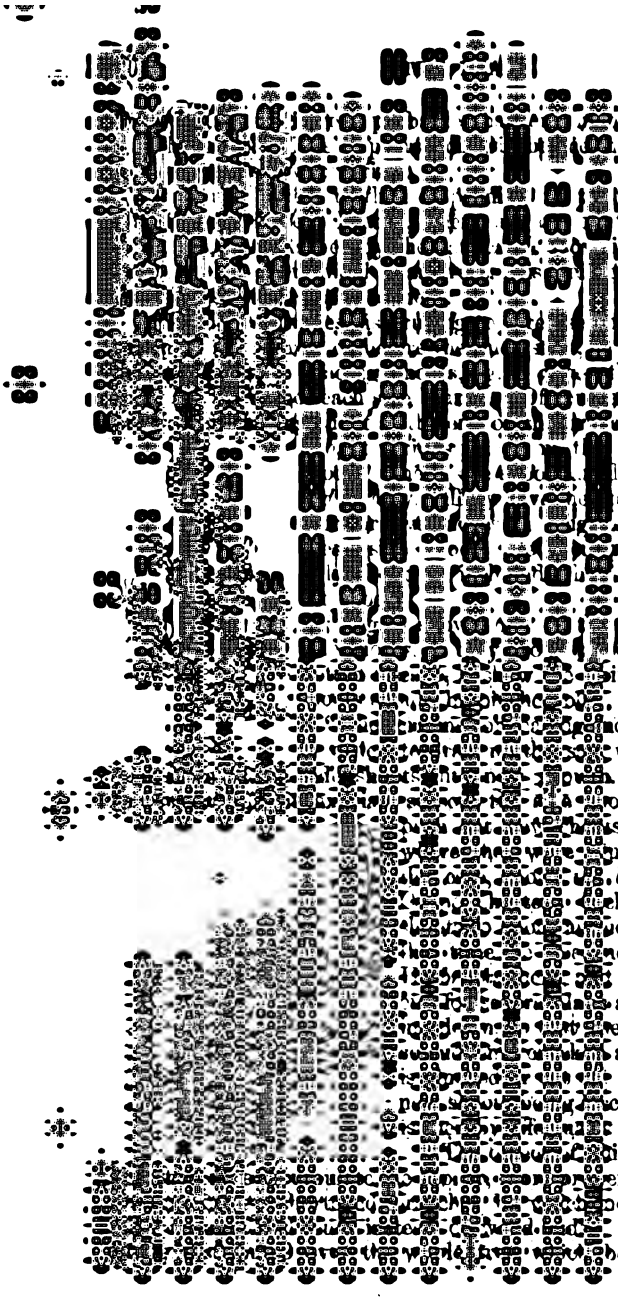
The second season the trees will make vigorous growth; the side shoots which were topped last August will each put forth three, four, or more shoots; as soon as these are four inches long they must be pinched off to within three inches, *all but the leading shoot of each side branch;* this must be left on, to exhaust the tree of its superabundant sap, till the end of August. The perpendicular leader must be topped once or twice; in short, as soon as it has grown ten inches, pinch off its top, and if it breaks into two or three shoots, pinch them all but the leader, as directed for the first season; in a few years, most symmetrical trees may be formed.

When they have attained the height of six or eight feet, and still continue to grow vigorously, it will be necessary to commence root-pruning to bring them into a fruitful state.

I have thus far given directions for those who are inclined to rear their own pyramids. Much time and attention are required; but the interest attached to well-trained pyramids will amply repay the young cultivator.

I will now endeavor to give directions for the management of trees adapted for the gardener of mature age, who feels somewhat impatient if his trees do not begin at once to be fruitful. A most valuable auxiliary to precocious fruitfulness in pears is the quince stock; pears grafted on it may be safely recommended for all soils of moderate depth and fertility, and even for light and sandy soils I am induced to advise it, only in those circumstances the trees must have more care and higher cultivation. In soils of that nature I should recommend the surface of the soil round the tree to be covered during June, July, and August, with short grass, moss, or manure, and to give them once a week, in dry weather, a drenching with guano water, (about two pounds to six gallons,) which must be well stirred before it is used; each tree should have twelve gallons poured gradually into the soil: by this method the finest fruit may be pro-

* There are generally three or four abortive buds at the base of each shoot: these must not be reckoned.



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after year, sending out new side shoots, which are pinched back in the same manner every summer.

"In order to keep the tree finely proportioned, the eye of the pruner must be a nice one, that he may, with a glance, regulate the pruning of the terminal branches or leaders, which, as we have just said, are shortened back in March—for then is the time to adjust any extravagances of growth which the tree may have run into, on either side: and in the summer pinching the balance of growth is adjusted by pinching the side shoots that start out nearest the ends of the branches, quite short, say an inch and a half, while those that start near the bottom of the branch, (or the centre of the tree,) where they have less nourishment, are left from four to five inches long.

"Understanding this mode of pruning, nothing is easier than to form pyramidal pear trees of the most perfect symmetry, and beauty of form. But in order to have the branches regularly produced from the ground to the summit, you must plant a tree which is only a couple of feet high, so that you can form the first tier of branches quite near the ground, by cutting back the leader at the very outset; for if the tree is once allowed to form a clean body or stem, of course it is impossible afterwards to give it the requisite shape and fulness of branches at the bottom."

All this our readers will understand relates more especially to the art of pruning, as adapted to high or garden culture. Standard trees in the orchard require only the same or similar pruning to that pursued in the apple; very few trees, in fact, requiring aught but a thinning out of branches, or rather a preventing, while young, of the branches becoming too thick.

Insects and Diseases.—The *Scolytus pyri* is an insect described by Harris. This is by some counted as the cause of a species of blight. Its presence has, however, been rarely met with, and doubts arise among many cultivators whether it is as prevalent, and the *cause* of as much destruction, as reported.

The *Bupestris divaracata*, and perhaps some allied species, is found in the larvæ state under the bark, on the bodies of both the pear and apple; and what is often taken for sun-blight, is the effect of this insect. The bark appears blackened on the body of the tree, on the south or southwest side. Cutting it away carefully and destroying the larvæ in months of July to September, and washing the body first with ley-water, or strong soap-suds, and covering it with a coating of gum shellac, dissolved in alcohol, is the remedy.

The slug *Selandria cerasi* appears on the leaf of both cherry and pear in June, July and August. It is about half an inch long of a dull, greenish brown, slimy, shining, offensive appearance. It is easily destroyed, if taken in time, by scattering ashes or even

dirt over the leaves early in morning, or while the dew is on, following up the application some four or five days. The frozen-sap blight, etc., often so destructive to trees in the West, we have remarked on in previous pages, and refer thereto.

Selection of varieties known to be permanently successful on the quince.—As we have before remarked, while there are a great many varieties that at first take and grow well on the quince stock, there are but few comparatively that are permanently successful. It therefore becomes the planter to select with care, and plant with a view to permanence, only those that are known to succeed. Of the error of planting indiscriminately, we have had practical experience, as in planting the grounds of our present residence we looked to the testing of varieties, and therefore ordered and planted one tree only of a sort. On a double border so planted, containing over 200 sorts, we have already, in three years, discarded one half, and feel confident that not more than one half of the remainder will answer to continue permanently. As yet few or none of our American native pears can be depended on when grown on the quince, and as all introduced are of the quality described when grown on pear roots, we advise most planters so to procure them.

Of those known to succeed permanently when grown on quince, the following may be selected:

Summer Dean, *Doyenné d'Eté*,
English Jargonelle,
Madelaine,
Long Green of Autumn,
Beurré Diel,
Glout Morceau,
White Dean, *White Doyenné*,
Gray Dean, *Gris Doyenné*,
Striped Long Green of Autumn,
Weary Soldier, *Soldat Laboureur*,
Van Mons' Léon Le Clerc,
Summer Franc Real,
Bartlett,
Beurré d'Amalis,
Louise Bonne of Jersey,
Vicar of Wakefield,
Angoulême, *Duchess of ditto*,
Easter Beurré,
Duchess of Orleans,
Beurré of Anjou,
Boussouck, *Doyenné Boussouck*,
Passe Colmar.

Gathering of the Fruit, and Uses.—"Gather pears of the summer sorts rather before they are ripe, as, when thoroughly so, they eat mealy if kept above a day or two; even when gathered as they ought to be, in a week or less they begin to go at the core. They should not, however, be gathered when they require much force to pull them off. Autumn pears must also not be full ripe at the time of gathering, though they will keep longer than the summer. Winter pears, on the contrary, should hang as long on the trees as they may, so as to escape frost, which would make them flat in flavor, and not keep well. Generally they may hang to the middle of October on full standards, a week longer on dwarfs, but yet not

after they are ripe. The art of gathering is, to give them a lift, so as to press away the stalk, and if ripe, they readily part from the tree. Let them be quite dry when pulled, and in handling, avoid pinching the fruit, or in any way bruising it; as gathered, lay them quietly in shallow baskets."

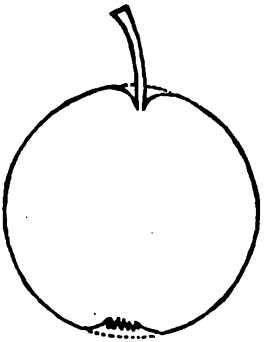
This process of gathering at the proper time, in connection with their after maturing, in a fruit-room or house of equable temperature, has often very much to do in deciding the quality of a pear. Many varieties are entirely worthless as dessert pears, unless so ripened, when, with this care, they are really the most delicious.

The old criterion of a good pear, viz.: one with a sugary aromatic juice, soft sub-liquid pulp or melting, as in the White Doyenné, or fine crisp and "breaking," as in the Bergamottes; firm, juicy, yet austere for cooking, as in the Pound, is equally good at this day as when first written.

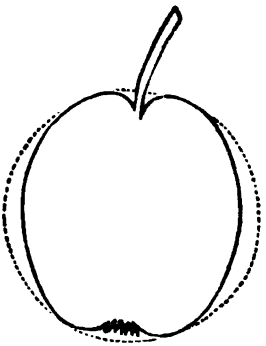
The common uses of the pear are for dessert, baking, stewing, drying, preserving, marmalades, and for perry. For the latter use, large orchards of the more common hardy sorts have heretofore been planted, and the result found more profitable than the same amount of ground appropriated to the apple for cider.

Varieties and Nomenclature.—The number of varieties now known is something over 1200, but of these it is more than probable over 1000 may be discarded, and then leave more than have qualities to sustain their continued culture when compared with the best. Throughout the West, the pear culture is only in its infancy, and we therefore place far less in our first class than probably may seem worthy that position by our Eastern pear amateurs; but we would rather our Western growers should plant varieties worthy their attention, than, as a whole, devote time to testing. We shall not pretend in this work to even note all varieties, but shall only speak of those most known in our own language, while we could wish (and probably may do so, as far as possible, at a future time) to transfer all names into the English language; we have at this time thought best in most cases to retain the foreign name, but in the first class giving the English meaning directly underneath, and in same size type. In other cases where the English rendering seemed appropriate, we have adopted it as the standard name, giving the heretofore standard name as the first synonym.

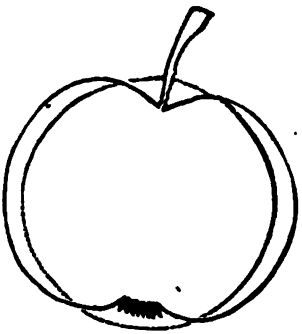
Forms and Size comparative.—Our forms illustrative of the terms used in description, are from the Transactions of the Massachusetts Horticultural Society. These are founded on the fundamental figure of a circle, and on this is drawn the form of the fruit; and where the circle forms not a part of the fruit form, it is shown by dots. It should always be recollected, that in the pear, *pyriform* is with the small end at the stem; while in the apple it is at the calyx.



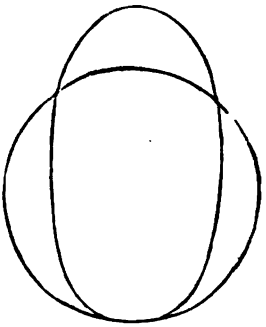
Globular.



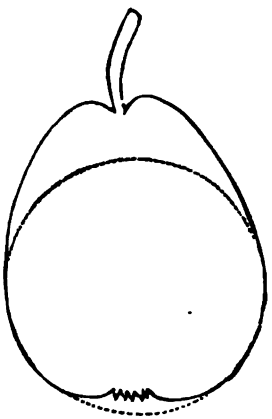
Ovate.



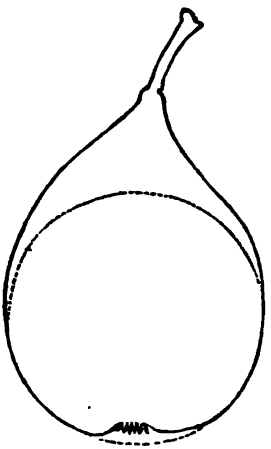
Oblong-ovate.



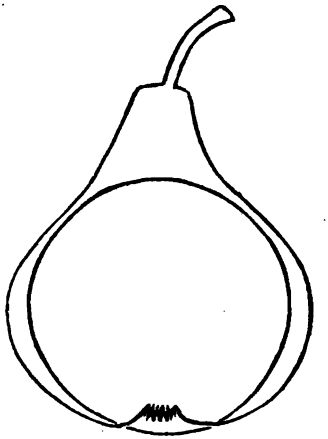
Oblong.



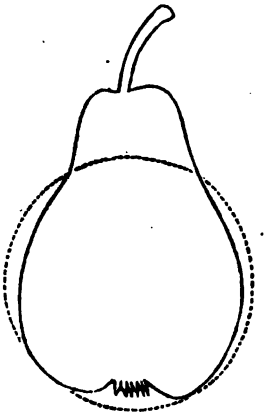
Globular; obtuse pyriform.



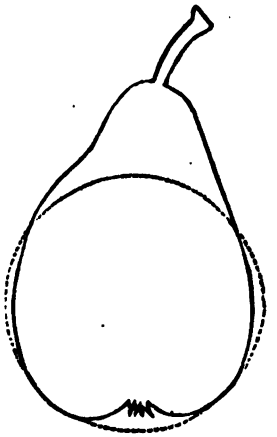
Globular; acute pyriform



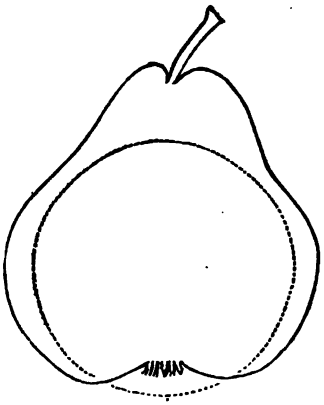
Obovate ; acute pyriform.



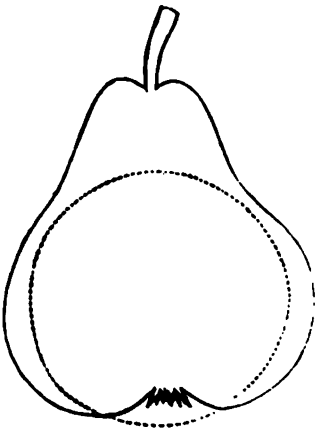
Ovate pyriform.



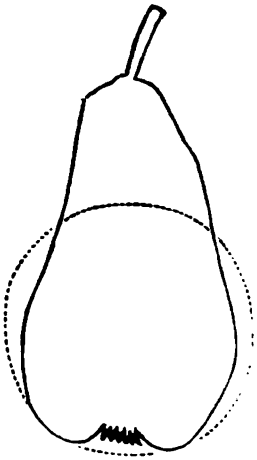
Oblong pyriform.



Obovate obtuse pyriform.



Oblong obovate pyriform.



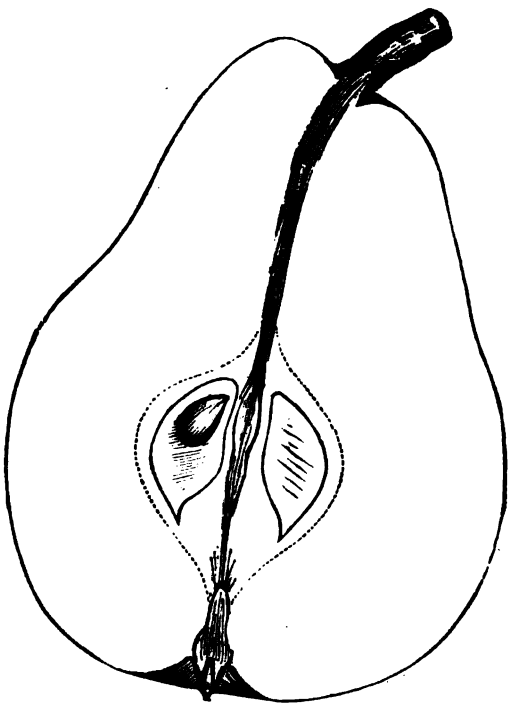
Oblong ovate pyriform.

Of size comparative, we take the Seckel as small; the White Doyenné or Virgalieu as medium; the Bartlett as large.

CLASS I.—*Worthy General Cultivation.*

BARTLETT.

William's Bon Chretien, | William's,
Poire Guilliaume.

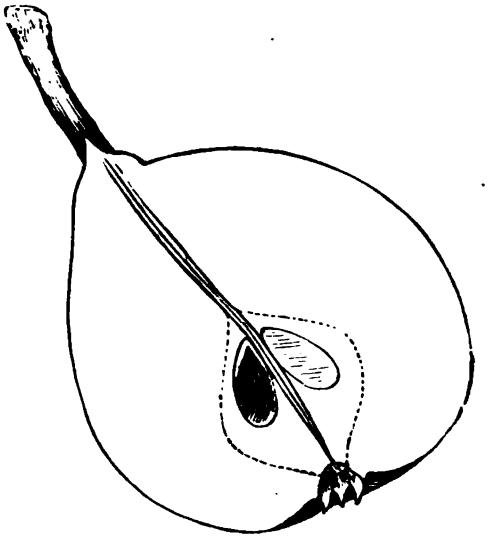


An English variety originated about 1770. Now extensively grown, and too well known to really need description. The trees are vigorous, and early productive of fair handsome fruit, either on pear or quince root.

Fruit, large, ovate, obtuse pyriform; surface somewhat uneven; *color*, clear light yellow, tinged with blush in sun when ripe, russet around the stem, and minute russet dots over the whole; *stem*, short, thick; *calyx*, medium, partly open; *basin*, shallow, furrowed; *core*, medium; *seeds*, broad ovate; *flesh*, yellowish white, melting, juicy, vinous. *Season*, middle August to middle September.

Belle Lucrative—Beautiful and Profitable

Fondante d'Automne, | Seigneur d'Esperen.



A Flemish variety; tree of moderate growth; productive bearer, young shoots long, yellowish gray.

Fruit, medium, obovate pyriform; *color*, pale yellowish green, slightly russeted; *stem*, stout, often fleshy; *calyx*, short, open; *basin*, medium; *core*, medium; *seeds*, ovate; *flesh*, melting, juicy, aromatic, sweet. *Season*, last September.

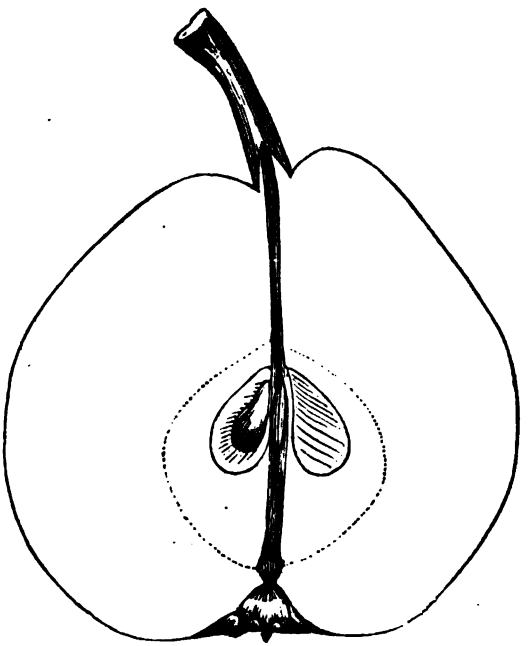
Beurre Langelier—Langelier's Butter.

A foreign pear, newly introduced: has fruited but few times in this country, but may safely be placed as best.

Fruit, large, obovate pyriform, contracted toward, and terminating obtusely at, stem; *color*, light green, becoming, at maturity, pale yellow, with a dull red cheek in sun, and numerous gray russet dots; *stem*, one inch, or more, long, angularly inserted without depression; *calyx*, medium; *basin*, shallow, plaited; *core*, medium; *seeds*, long ovate pyriform; *flesh*, yellowish white, melting, juicy, fine-grained, sub-acid, slight perfume. *Season*, November to January.

Beurre Diel—Diel's Butter.

Diel,
Diel's Butterbirne,
Dorothée Royal,
Grosse Dorothée,
Beurré Royal,
Des Trois Tours,
De Melon,
Melon de Kops,
Beurré Magnifique,
Beurré Incomparable.

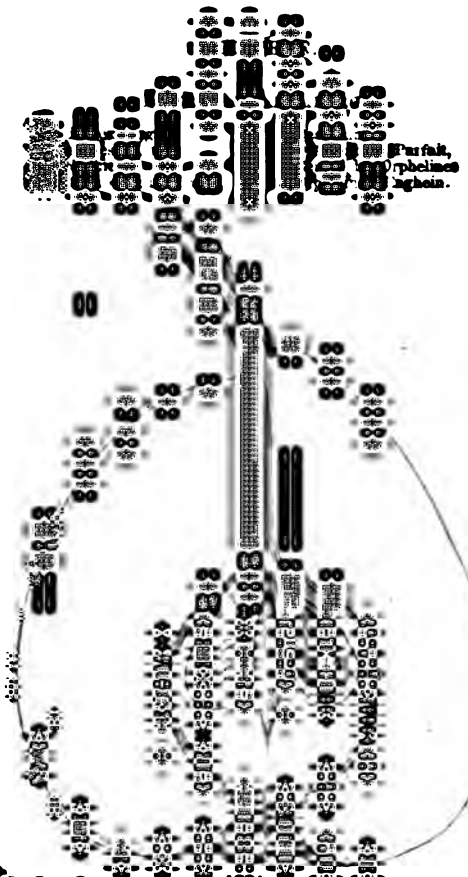


Foreign. Grows and fruits well on pear or quince, but is best on quince; tree, vigorous, the foliage large; wood, olive brown with grayish specks; very productive.

Fruit large, (our engraving is too small for an average,) obovate, obtuse pyriform, surface rather uneven; *color*, dull green, bright yellow when mature, russet specks, and scattered russet and greenish brown patches; *stem*, stout, and slightly curved; *cavity*, narrow; *calyx*, medium, open, long segments; *basin*, abrupt; *core*, large; *seeds*, dark brown; *flesh*, yellowish white, rather coarse, especially near the core; juicy, melting, perfumed. *Season*, October to last November.

Brandywine.

American, from the banks of the Brandywine river. *Tree*, thrifty, rapid grower, long upright shoots, regular and abundant bearer; *fruit*, medium, varying in form, generally obovate pyriform, running into the stem, which is fleshy and rather obliquely set; *color*, dull yellowish green, marked with russet dots and streaks, and much russeted about eye; *calyx*, open, segments few; *basin*, smooth, moderate depth; *core*, small, compact; *seeds*, few, dark brown; *flesh*, white, melting, juicy, vinous. *Season*, last of August, first of September.



nfounded with Glout
which it is distinct.
own, dotted with pale
; trees, very hardy,
bundantly; the fruit
at will from Decem-
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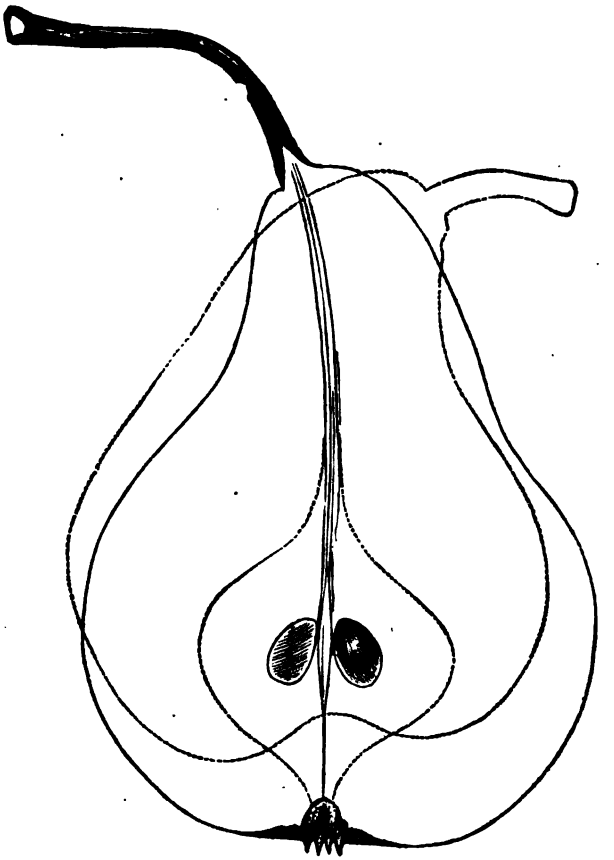
orm, tapering toward
junction; *color*, dull
ith green, with traces
ort, stout, uneven, set
sed, segments short;
own, acutely pointed;
cember to February.

Buerre Bosc.

Calebasse Bosc, | Marianne Nouvelle,
Bosc's Flaschenbirne.



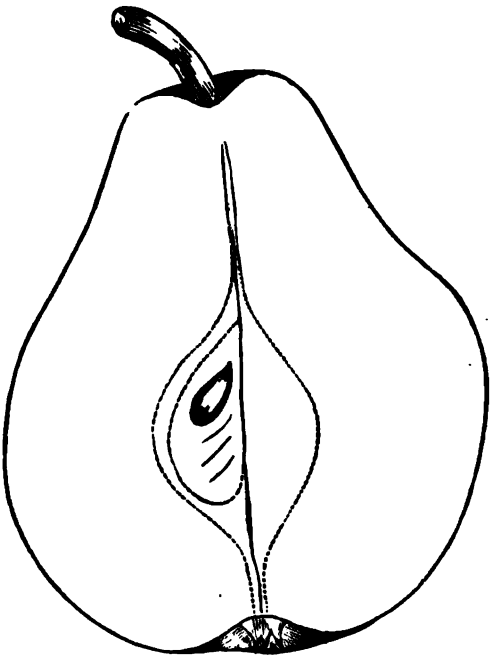
A foreign variety raised in 1807 by Van Mons. It is an early, annual, and productive bearer on the pear roots and should have a place in the smallest collection. *Tree*, vigorous, with long brownish olive shoots straggling or diverging. The fruit varies some in size and form, as see our checked outline in engraving, but it is always fair and smooth.

Fruit, large, obovate, acute pyriform; *color*, dark yellow, nearly

covered, dotted and marbled with cinnamon russet, slight brownish red in sun; *stem*, usually long, slender; *calyx*, medium, segments partially erect; *basin*, round, shallow, sometimes a little uneven; *core*, small; *seeds*, blackish; *flesh*, white, melting, juicy, sweet, perfumed. *Season*, October, or last of September.

BUERRE D'ANJOU.—BUTTER OF ANJOU.

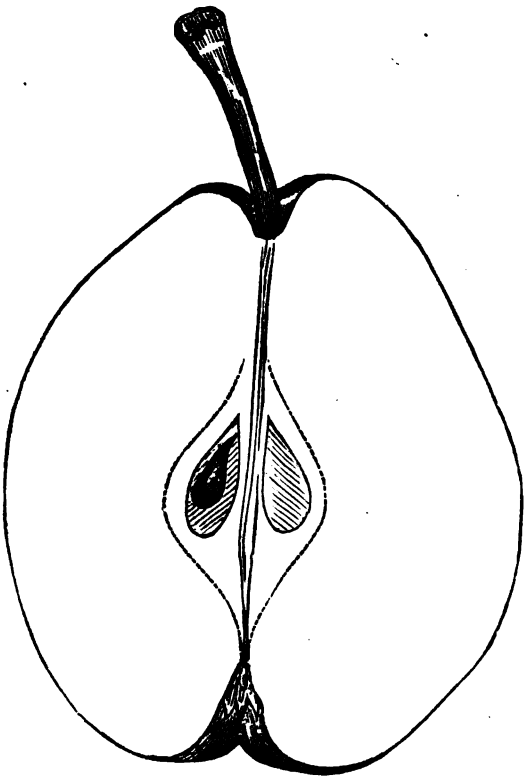
No Plus Meuris.



Foreign. An old pear in Loudon's select list of 1834, recently introduced under a new name, and grown on quince. It is found of the highest excellence. It succeeds equally well on pear or quince, but largest on quince. *Fruit*, large, oblong, obovate pyriform, obtuse at stem; *color*, pale yellow, dull blush, and numerous small specks of faint russet; *calyx*, open, segments thick, reflexed; *basin*, round, not deep, russeted; *stem*, short, curved, and obliquely inserted in a shallow cavity; *core*, small; *seeds*, long, pointed; *flesh*, yellowish white, melting, juicy, vinous, sprightly, delicious to the core. *Season*, October and November.

Beurre Easter.

Beurré Gris d'Hiver Nouveau,
Doyenné d'Hiver,
Doyenné du Printemps,
Bergamotte de la Pentecote,
Beurré de la Pentecote,
Beurré d'Hiver de Bruxelles,
Beurré Roupé,
Du Patre,
Beurré de Paques,
Philippe de Paques,
Bezi Chaumontelle trés gros,
Chaumontel trés gros,
Canning,
Seigneur d'Hiver,
Pater Noster.

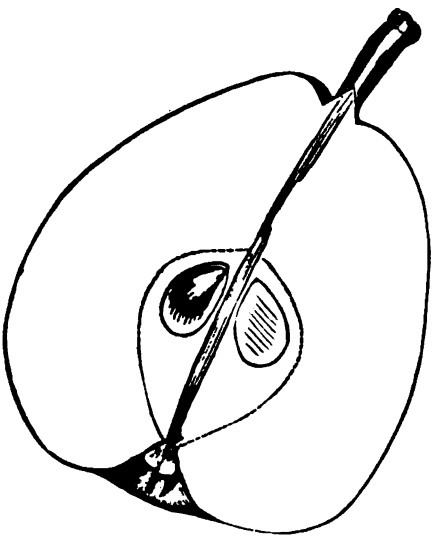


Forcign. Requires rich, warm soil, and some care in ripening, when it is one of the very finest of pears. It is best on quince.

Fruit, large, globular, obtuse pyriform; *color*, yellowish green with russet spots, and occasional specimens grown in sun have a brownish russet cheek; *stem*, medium to short; *cavity*, rather deep; *calyx*, generally small; *basin*, narrow rather deep; *core*, medium;

seeds, long, ovate, acute pyriform; *flesh*, white, buttery, juicy, sweet. *Season*, January to May.

Buffum.



American. Native of Rhode Island. It is very successful wherever grown, admirably adapted to standard orcharding, an upright, strong grower, reddish brown shoots, always productive of fair, even-sized fruit; not, however, of more than second-rate quality.

Fruit, medium, oblong, obovate; *color*, brownish green, becoming yellow, bright red, suffused in sun; brown dots and a little russet; *stem*, half to inch long, slight depression; *calyx*, with short recurved segments; *basin*, round; *core*, rather small; *seeds*, dark brown; *flesh*, white, buttery, sweet. *Season*, September.

Black Worcester.

Black Pear of Worcester, | Parkinson's Warden,
Iron Pear.

A valuable and profitable variety for marketing and cooking purposes; shoots dark olive, diverging; tree, hardy, vigorous.

Fruit, large, obovate, oblong; *color*, dull green, with numerous marblings and specks of dark iron russet; *stem*, stout, in a slight depression; *calyx*, rather small; *flesh*, firm, coarse, austere. *Season*, November to February.

Boussouck.

Doyenné Boussouck, | Providence,
Doyenné Boussouck Nouvelle, | Plymouth.

Foreign. A variety, we believe, first introduced to this country in 1841, by Wm. Kenrick; tree, vigorous; wood, reddish brown,

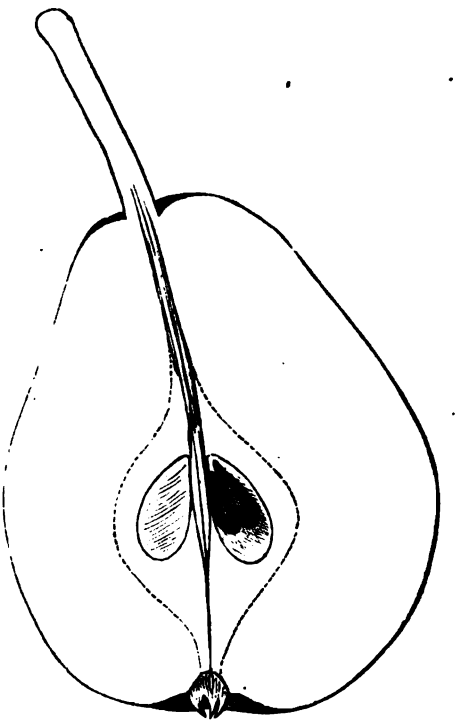
sprinkled with large round grayish specks; a good and regular bearer; fine on quince.

Fruit, large, globular, obtuse, obovate pyriform; *color*, yellow, with tracings of russet, and large russet specks; *stem*, short, stout, fleshy at base; *cavity*, shallow; *calyx*, medium, open; *core*, medium; *seeds*, small, almost black, abortive; *flesh*, yellowish white, rather coarse, melting, juicy, vinous, sweet perfume. *Season*, October.

Columbia.

Columbian Virgalieu, | Columbian Virgalouse.

Native of Westchester county, N. Y. Without being of more than second quality, its hardihood of tree, productive habit, and fruit uniformly smooth and fair, make it a valuable as well as profitable variety. Tree, thrifty; young shoots, yellowish brown.

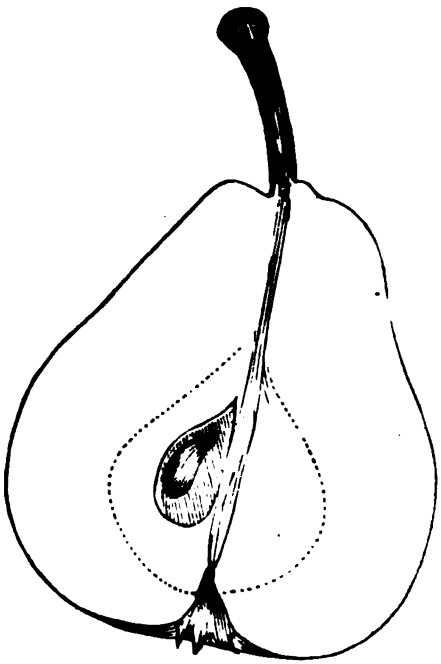


Fruit, large or above medium, oblong, obovate pyriform; *color*, at first pale green, becoming, when ripe, fine golden yellow, dotted with small gray dots; *stem*, medium size, slightly curved; *calyx*, rather small, partially open, or half closed; *basin*, shallow; *core*, medium; *seeds*, oblong pyriform; *flesh*, white, moderately juicy, sweet. *Season*, December to January.

Coit.

Beurré Coit.

A new variety, raised by Col. Coit, of Euclid, O. We first ate of it in 1846, when we made our notes in its favor. Since that we



have seen it several times, and as we write this, September 25, 1853, have the fruit before us. It is worthy a place in all collections. The tree is hardy, vigorous, upright, spreading in form, dark brown shoots, and early good bearer on the pear root. Our drawing was made from a specimen pulled in August, and is below an average size.

Fruit, above medium, obtuse pyriform, slightly angular; color, rich brown russet, mostly overspreading a yellow ground, with a brownish red cheek in sun; *stem*, rather short; *cavity*, shallow, with unequal projections; *calyx*, with segments nearly erect, surrounded by depressed crescent-shaped furrows in a shallow basin; *core*, small; *seeds*, blackish; *flesh*, yellowish white, melting, buttery, juicy, sweet, vinous. *Season*, last September and October.

Dearborn's Seedling.

Wheeler's New St. Michael.

Raised by Gen. H. A. S. Dearborn, about 1819, at Roxbury, Mass. Tree, vigorous, erect, yet spreading; requires little pruning; productive on the pear root.

Fruit, rather small, roundish, inclining to obovate, narrowing a little to the stem; *color*, pale yellow, little russet at base of stem, and surface dotted with small russet dots; *calyx*, with short thick segments; *stem*, long, slender, curved; *core*, medium; *seeds*, dark brown, long, pointed; *flesh*, yellowish white, fine-grained, melting, juicy, sweet, delicately perfumed. *Season*, August.

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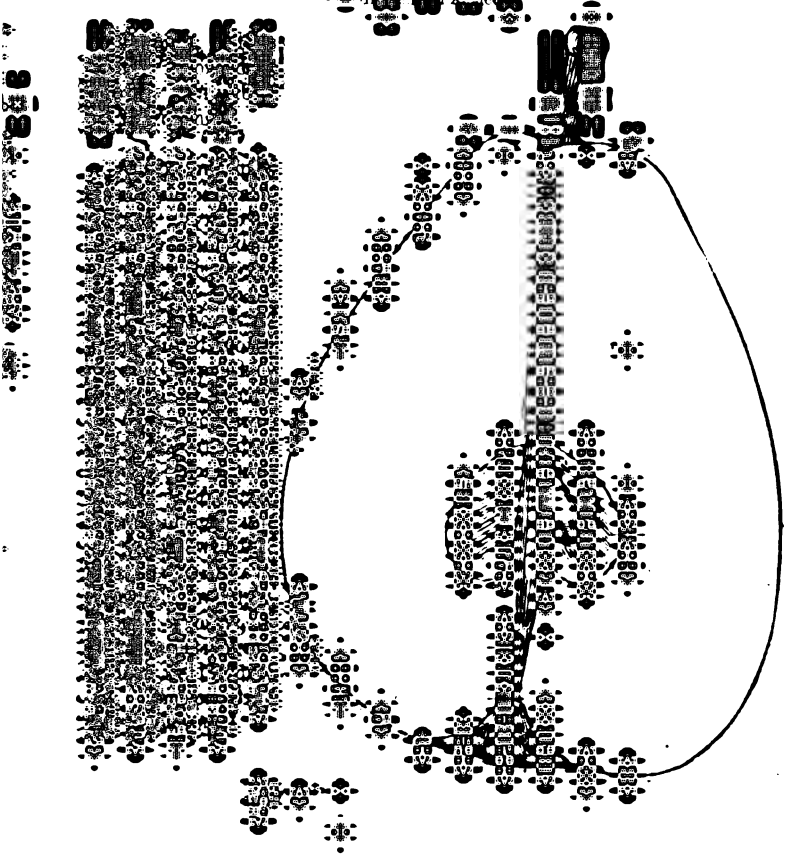
ER GRAY



Doyenne Gray.

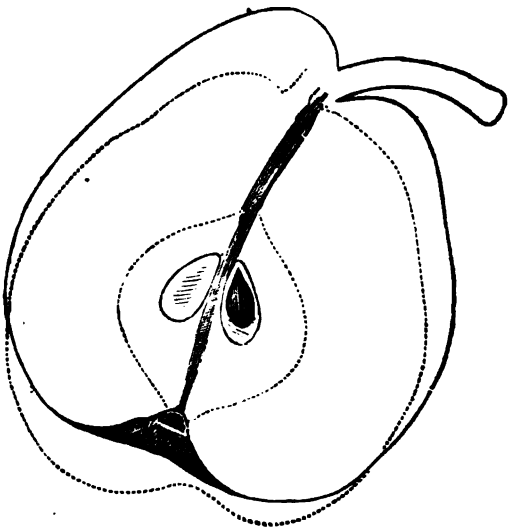
Grt. / Butter Pear,	Gray Dean's,
Gray Doyenné,	Doyenné Gris,
Doyenné Rouge,	Red Doyenné,
Doyenné Roux,	St. Michel Doré,
Doyenné d'Automne,	Doyenné Galeux.

This has been confounded with "Boussouck" and with "Surpassé Virgalieu," but is distinct. It is a good bearer on pear or quince, a hardy tree, with upright grayish brown shoots.

Fruit, medium, roundish, obovate or obtuse pyriform; *skin*, covered with smooth cinnamon russet; *stem*, curved; *cavity*, rather deep; *calyx*, small, closed; *basin*, shallow; *flesh*, white, fine-grained, buttery, melting. *Season*, October.

Doyenné White.

White Dean,	Dean's,
Virgalieu,	Warwick Bergamotte,
Butter Pear,	Snow Pear,
St. Michael,	Pine Pear,
Virgaloo,	St. Michael,
Bergaloo,	Doyenné,
Yellow Butter,	Doyenné Blanc,
White Beurré,	Beurré Blanc,
White Autumn Beurré,	And twelve others of French and Dutch



An old variety, every where esteemed when well grown; trees, hardy, productive either on pear or quince.

Fruit, medium, obovate pyriform; *color*, clear pale yellow, regularly sprinkled with small dots, often a fine red cheek; *stem*, medium, brownish; *cavity*, small, round; *calyx*, small, closed; *basin*, shallow, slightly plaited; *flesh*, white, fine-grained, melting, juicy, buttery, delicious. *Season*, September to November.

The Doyenne Panachee is a sub-variety, differing from this in its more pyriform shape, and its color being yellow, green, and red, striped. It is juicy, not high flavor. *Season*, October.

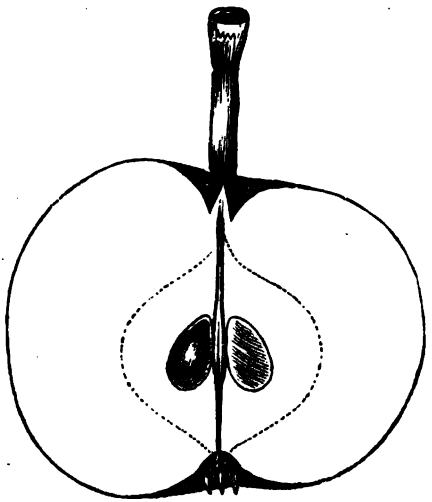
Dix.

American. Origin, Boston, Mass. *Tree*, hardy, vigorous young shoots, pale yellow, upright, slender, unproductive while young, well suited to extensive orcharding. *Fruit*, large, oblong pyriform; *skin*, little rough, yellow, with russet dots, and around the stem; *stem*, set obliquely, raised one side, short, stout, thickest at each end; *calyx*, small; *basin*, shallow; *core*, marked with a dark gritty circle, extending toward the stem; *flesh*, yellowish white, melting, a little harsh, juicy, sweet. *Season*, October and November.

Fulton.

American. Native of Maine; tree very hardy, yearly and abundant bearer, well suited for standard orcharding at the West; young shoots slender, reddish brown.

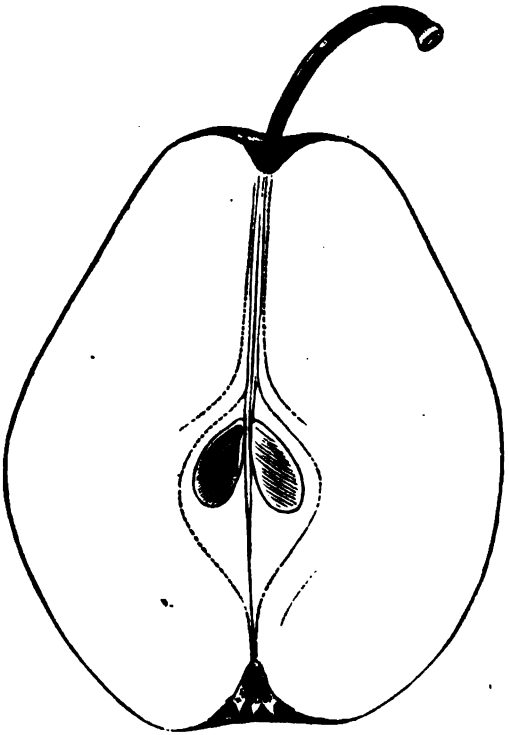
Fruit, small, obovate; *color*, at first gray russet, becoming dark cinnamon russet; *calyx*, open, segments nearly erect; *basin*, round, regular; *stem*, one to two inches long; *cavity*, narrow; *core*, encircled by a coarse line, but of itself small, compact; *seeds*, blackish; *flesh*, half buttery, moderately juicy, sprightly. *Season*, October, November.



Flemish Beauty.

Belle de Flanders,
Bouche Nouvelle,
Bosch,

Bosc Sire,
Imperatrice de France,
Beaurré Spence.



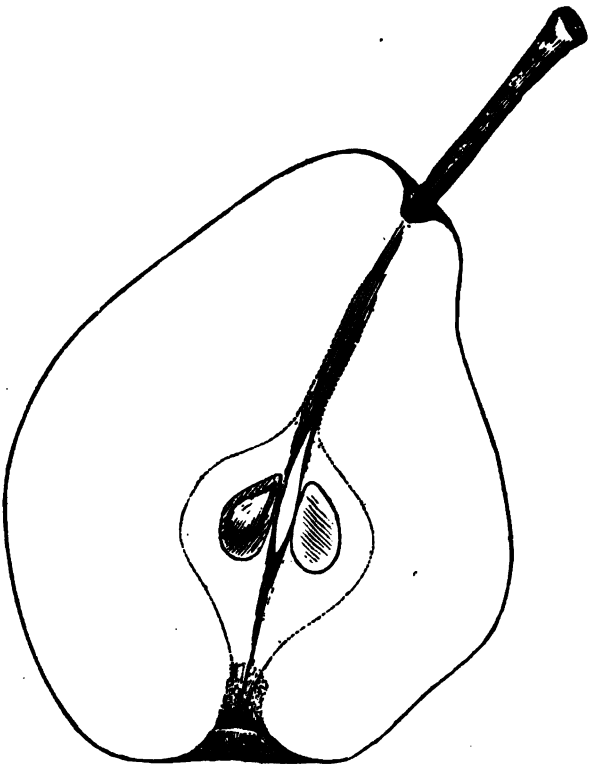
Foreign. This variety is deserving of far more general cultivation than it has yet received. It succeeds most admirably on the quince, and on the rich soils of Illinois we have seen it far surpass even the most highly nursed specimens of Boston amateur gardens. The tree is vigorous, with upright dark brown shoots.

Fruit, large, oblong, obtuse obovate; *color*, pale yellow, mostly covered with marblings and patches of light russet, and in sun rich reddish brown; *stem*, one to one and a half inch long; *cavity*, narrow, deep; *calyx*, short, open; *basin*, round, small; *core*, medium, with oblong capsules; *seeds*, oblong pyriform; *flesh*, yellowish white, not very fine-grained, juicy, melting, sugary. *Season*, last of September. Does not keep long.

Glout Morceau.

Goulu Morceau,
Gloux Morceau,
Beurré d'Hardenpont,
Hardenpont d'Hiver,
Colmar d'Hiver,

Beurré d'Hiver Nouvelle,
Linden d'Automne,
Roi de Wurtemberg,
And five more of German.
Beurré d'Aremberg, *of the French.*



This variety is regarded as among the most delicious of Flemish pears. The rendering of its name to sugared or honeyed pear is only expressive of its quality, and equally so of many more; and as this cannot claim the title par excellence, we see not but it must retain its original, and those who grow it must speak the name as best they may.

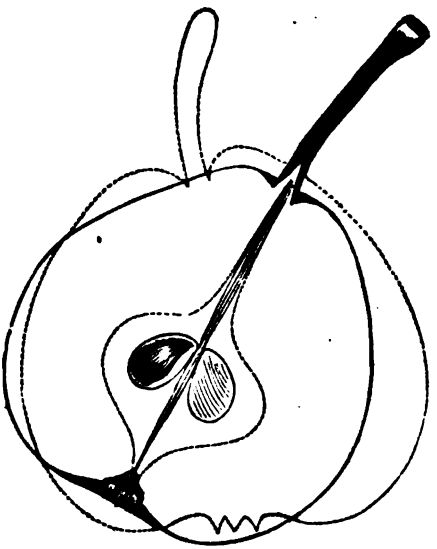
It is an unproductive variety while young, either on pear or quince; trees on the latter stock even requiring ten years to bring

them well into bearing; once at maturity, it is an abundant bearer. It is a beautiful grower, making a perfect pyramidal head with little pruning. It is also easily distinguished by its dark olive-green or blue-green wood and its wavy leaves.

Fruit, large, obovate, obtuse pyriform, often angular, and surface rough; *color*, pale greenish yellow, russeted around the stem, and traces of russet and greenish gray russet specks over the whole surface; *stem*, one to one and a half inch long, often without cavity, but flesh raised one side; *calyx*, medium, segments half reflexed; *basin*, rather deep, often furrowed or uneven, like the general surface of the fruit, which is frequently apparently scolloped; *core*, large; *seeds*, large, ovate, pointed; *flesh*, white, fine-grained, buttery, juicy, sugary, perfumed. *Season*, December to February.

Golden Beurre of Bilboa.

Hooper's Bilboa.



Foreign. From Spain; tree, hardy, requires rich, strong, heavy soil, when it is an abundant bearer of fair, regular, medium-sized fruit of second-rate quality.

Fruit, medium, obovate; *color*, rich yellow, with russet around the stem, and many russet dots and patches over the entire surface; *stem*, slender; *cavity*, slight; *calyx*, small, mostly open, short stiff segments; *basin*, shallow; *flesh*, fine-grained, melting, juicy, sometimes a little acid and harsh. *Season*, September.

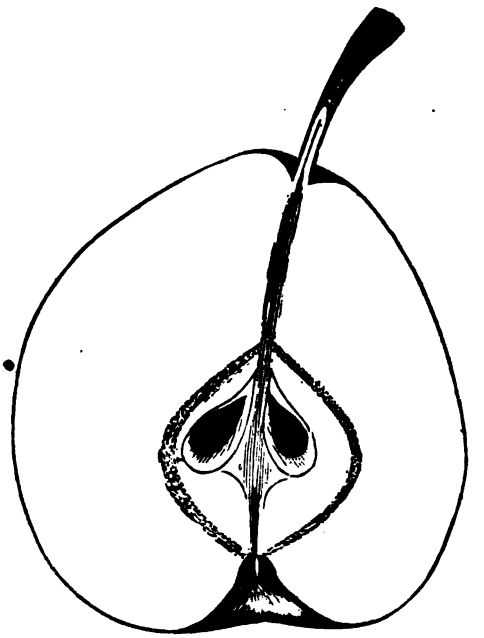
Heathcot.

Gore's Heathcot

Native of Waltham, Mass. This variety has not received as

much attention as it has deserved; tree, hardy, a moderate grower, branches slender, when grown makes a compact head unless well thinned out, young shoots reddish brown.

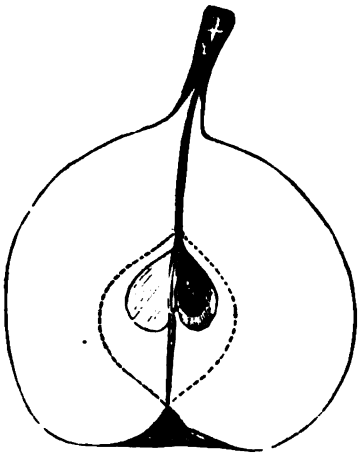
Fruit, medium or above, obovate, rounded; skin, rough; *color*,



greenish yellow, yellow increasing at maturity, some russet around stem and eye; *stem*, medium; *cavity*, shallow; *calyx*, partly closed; *basin*, narrow; *core*, above medium; *seeds*, dark brown, pointed; *flesh*, white, buttery, juicy, vinous and sprightly. *Season*, October.

Honey.

This is a delicious little pear, received some years since by Prof. Kirkland, and which we have been unable to recognize with any description published, if we except a slight note in Prince's Pom. Man. The tree is moderately vigorous; wood, yellowish brown, an early and productive bearer of fruit, uniform in size and regular shape. Our drawing is too small.

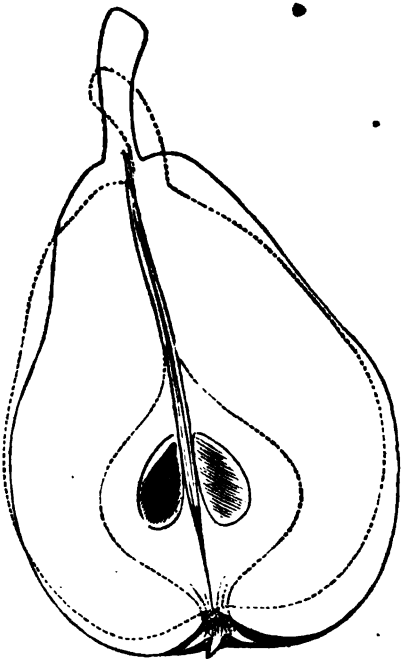


Fruit, below medium, roundish, tapering slightly to the stem; *color*, rich golden russet yellow, with faint blush, many small red russet dots, and occasional patches of brown russet; *stem*, rather stout, uneven, without depression; *calyx*, with open half-reflexed segments; *basin*, shallow, little russeted; *core*, medium; *seeds*, ovate, blackish; *flesh*, yellowish white, juicy, buttery, a little coarse-grained, sweet, perfumed. *Season*, a few days before Bartlett.

Jalousie de Fontenay Vendee.

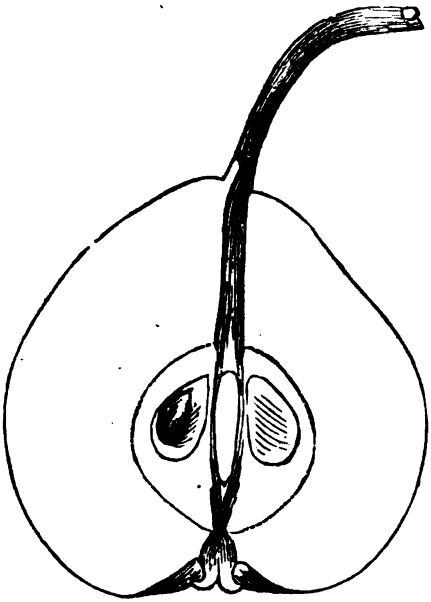
Foreign. We have never fruited a pear that has given us more satisfaction. On the quince it is a fine grower, and inclined to over-bear. It must not be confounded with the "Jalousie," a third-rate variety. Young shoots upright, brownish yellow.

Fruit, medium or above, ovate pyriform; *color*, dull yellow, with brownish red cheek, and patches and dots of russet, often the russet covering one half the surface; *stem*, varying, often obliquely set on, with a fleshy ridge at side; *calyx*, with segments long, half open; *basin*, shallow; *core*, medium or small; *seeds*, long, ovate; *flesh*, white, buttery, melting, juicy, sweet, aromatic. *Season*, last September, early October.



KNIGHT'S SEEDLING.

Knight's R. I. Seedling.

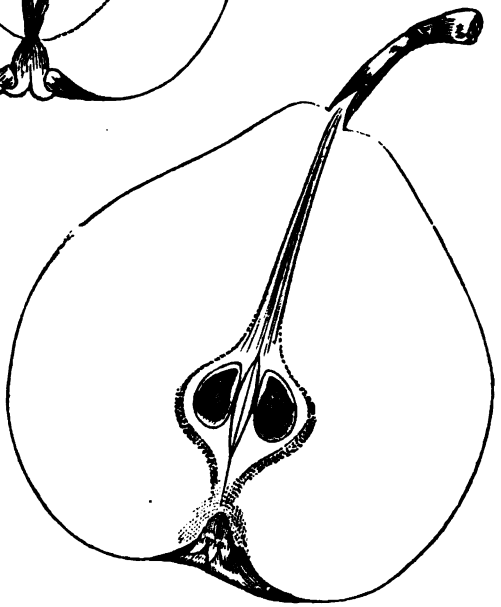


Native of Cranston, R. I. Tree, vigorous, hardy, and early productive; wood, smooth, yellowish.

Fruit, medium, obovate, tapering a little to the stem; *color*, yellowish green, with a brown red cheek in sun, brownish specks, and dull russet around the calyx; *stem*, medium or rather long, curved; *calyx*, medium, segments broad, partially reflexed; *core* and *seeds*, medium; *flesh*, white, not fine-grained, melting, juicy, sugary. *Season*, September.

KIRTLAND.

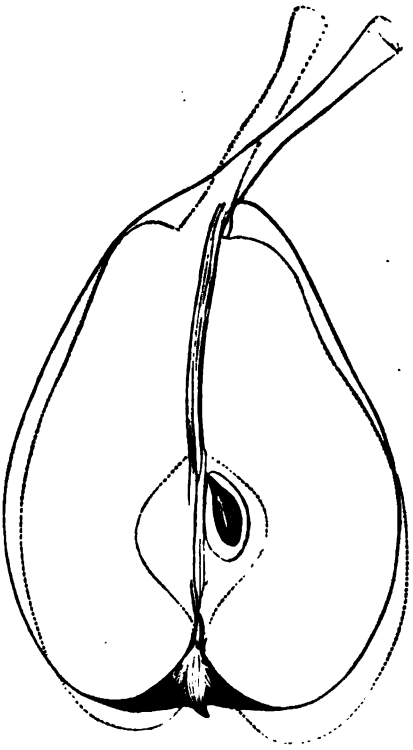
Seedling Seckel,
Kirtland's Seedling,
Kirtland's Beurré



Grown from seed of the Seckel pear by H. T. Kirtland, of Mahoning Co., Ohio. Tree, vigorous, hardy, early and productive bearer on pear roots; shoots, yellowish brown, upright, stout.

Fruit, medium, often above, obovate, obtuse pyri-

form; *color*, rich yellow, overspread with cinnamon russet; *stem*, usually stout, medium length, curved; *calyx*, short, reflexed, persistent; *basin*, shallow; *core*, small; *seeds*, short, ovate, blackish; *flesh*, white, melting, juicy, sweet, aromatic. *Season*, September.



Louise Bonne of Jersey.

Louise Bonne de Jersey,
Louise Bonne d'Avranches,
Beurre or Bonne Louise d' Arandore,
William the Fourth.

The "Good Louise of Jersey," from the Isle of Jersey, proves one of the best pears grown on the quince stock in this country. Tree, hardy, very productive, shoots vigorous, upright. *Fruit*, large, (our drawings were made ere the fruit had swollen its full size, and are not more than half size,) oblong pyriform; *skin*, glossy, smooth, green in shade, brownish red in sun, dotted with gray dots; *stem*, about one inch long, moderately stout, a little curved, fleshy enlargement at base; *calyx*, open, segments large, reflexed; *basin*, shallow; *core*, small; *seeds*, long, ovate, pointed; *flesh*, white, juicy, melting, delicious. *Season*, October.

Lawrence.

Native of Flushing, L. I. An abundant bearer on pear roots, exceedingly desirable for Western orcharding. Tree, hardy, moderate growth, wood light yellowish brown, rather thorny. S. B. Parsons says, "Succeeds very finely on quince."

Fruit, above medium, long obovate, obtuse at stem; *color*, dull pale yellow, marbled with dull green, small dark specks, and russet at each end; *calyx*, large, closed; *basin*, open, furrowed; *stem*, medium length, stout, swollen at junction with tree; *cavity*, round,

deep; *core*, medium; *seeds*, small, dark brown; *flesh*, yellowish white, juicy, gritty at core, slightly sugary. *Season*, November to February.

Long Green.

Verte Longue, | New Autumn,
Mouth Water, | Muscat Fleuré,
Mouille Bouche.

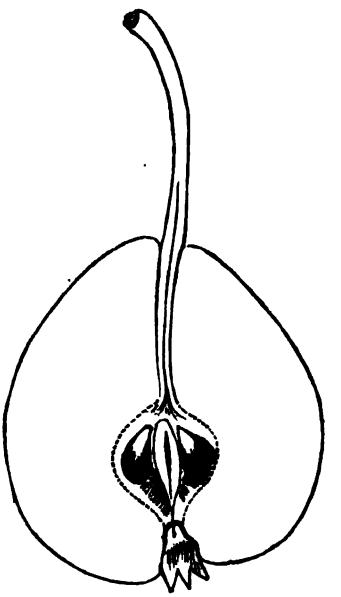
This is an old foreign variety, always excellent, and an abundant bearer.

Fruit, medium, oblong, ovate pyriform; *color*, green with dark green specks; *stem*, medium length, slender; *calyx*, with long reflexed segments; *basin, very* shallow; *core*, above medium; *seeds*, dark brown; *flesh*, yellowish white, melting, juicy, delicious. *Season*, October.

The *Striped Long Green, Verte Longue Panachée*, resembles the above, but is smaller, and of no great value, aside from its prettily striped appearance.

Madeleine.

Citron des Carmes, | Magdalen.



Foreign. Tree very vigorous, strong grower, a little liable to frozen sap blight on the rich Western soils, until it has acquired the age of ten or more years; very productive on pear or quince root.

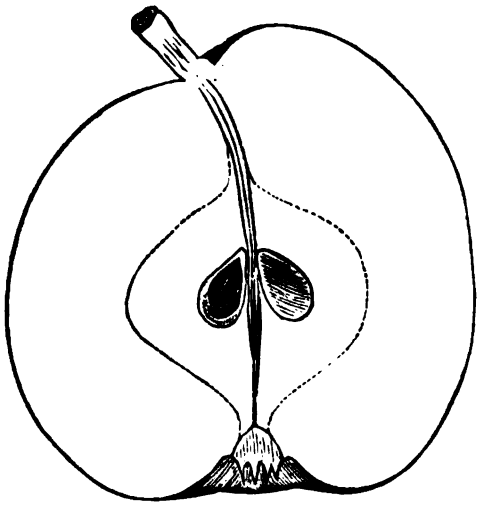
Fruit, below medium, (our drawing one third too small,) obovate, oblong pyriform; *stem*, long, slender, at base one side of fruit a little enlarged; *color*, pale yellowish green, a little brownish blush, and russet specks on those exposed most to sun; *calyx*, with long persistent, irregularly placed segments; *basin*, obscure, slightly plaited; *core*, small; *seeds*, ovate; *flesh*, white, juicy, melting, sweet, slightly perfumed. *Season*, 15th to last July.

The *Striped Madeleine Citron des Carmes Panachee*, differs from the former in being striped with light yellow, flesh more sweet and less

juicy. It is not as vigorous in growth, the wood shorter jointed, striped red and yellow, and said to be less liable to blight.

Moyamensing.

Smith's Moyamensing.



Native of Pennsylvania. Tree vigorous, wood yellowish brown, with light dots, regular and abundant bearer.

Fruit, medium, roundish, obovate; *color*, lemon yellow with occasional blotches and lines of yellowish russet; *stem*, short, stout, often fleshy; *calyx*, large; *basin*, furrowed, broad and rather deep; *core*, medium; *seeds*, ovate; *flesh*, white, buttery, melting, juicy, "best." *Season*, August.

Nouveau Poiteau.

New Pear.

Foreign. Tree upright, vigorous, an early bearer, and thus far successful on both pear and quince stock.

Fruit, above medium, obovate, obtuse pyriform, contracted or one-sided at neck; *color*, pale green with many dark green dots, and a few russet stripes or blotches; *stem*, about one inch long, medium size, set on, and not into, the fruit; *calyx*, medium, with broad segments half reflexed; *basin*, irregularly contracted; *core*, medium, capsules long, ovate; *seeds*, obovate pyriform; *flesh*, white, fine-grained, juicy, melting, rich aroma. *Season*. November.

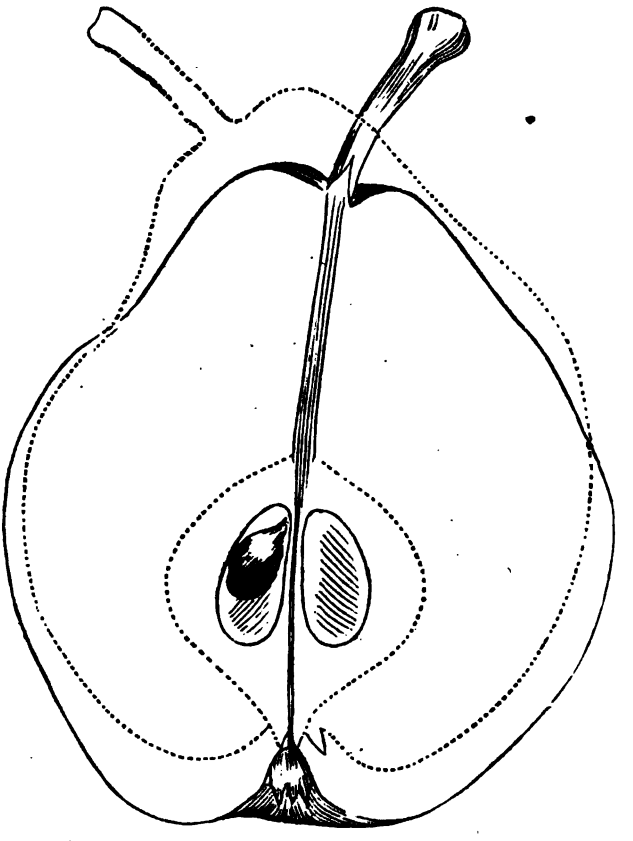
Onondaga.

Swan's Orange, | Onondaga Seedling.

Probably a native of Farmington, Ct. It takes its name from having been first brought to notice by cultivators in Onondaga Co.

N. Y. Thus far it succeeds equally well on the quince or pear root, and as a profitable market variety deserves extensive culture. Tree vigorous, with strong, upright, olive-colored shoots.

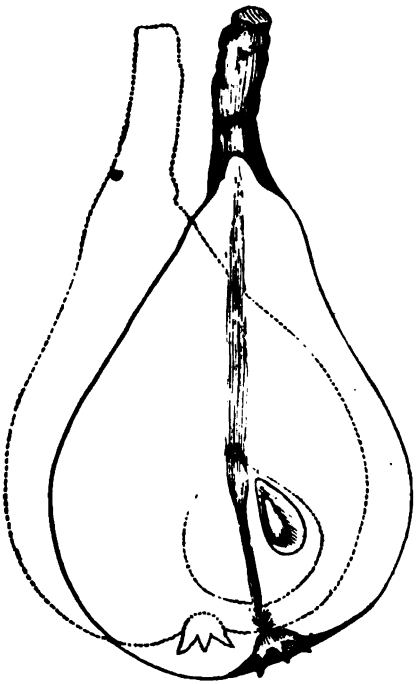
Fruit, large, ovate, obovate; *color*, pale greenish yellow, becoming golden yellow at maturity, many gray russet dots, and occasionally



a dull blush in sun; *stem*, one to one and a half inch long, inserted without depression, but with lip of fruit folded unevenly around it; *calyx*, rather small, closed; *basin*, shallow, abrupt, and marked with patches of cinnamon russet; *core*, compact; *seeds*, small; *flesh*, white, juicy, buttery. *Season*, October and November.

Payency.

Paquency, | Poire de Périgord,
Poire de Payency, | Payenchi,
Payenchi de Périgord.



Foreign. Tree of vigorous growth, early bearer, and especially profitable on the quince.

Fruit, medium, pyriform, extending into the stem, which is stout, uneven, dark brown; *color*, at first dull pale green, becoming brownish yellow at maturity, many russet dots and patches round stem and calyx, few in centre, occasionally a tinge of dull red in sun; *calyx*, open, segments half erect; *basin*, very shallow; *core*, small; *seeds*, oblong, pointed, dark brown; *flesh*, white, rather coarse, melting, juicy, sugary, vinous. *Season*, October.

Pound.

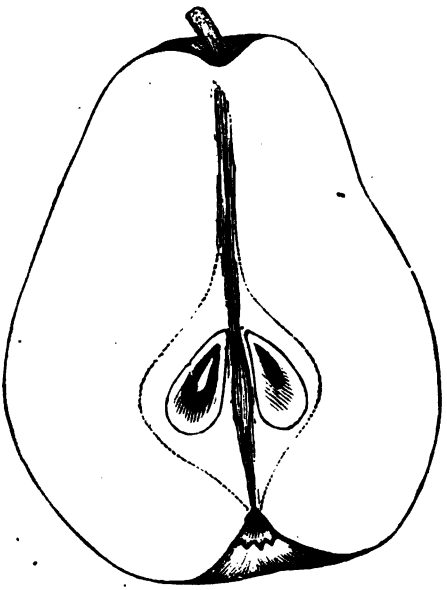
Winter Bell, | Pickering Pear,
Bretagne le Cour, | Du Tonneau,
Uvedale's St. Germain, | Belle de Jersey,
Uvedale's Warden, | Piper,
Germain Baker, | Union,
Lent St. Germain, | Chambers' Large,
Belle Angevine.

Foreign. Tree strong vigorous grower, very productive, very valuable for cooking, and a profitable orchard sort.

Fruit, very large, oblong pyriform, yellowish green with dull brown and brown russet patches; *stem*, long, stout, curved; *cavity*, deep, oblique, angular; *calyx*, large; *flesh*, white, firm, astringent. *Season*, December to March.

Prince's St. Germain.

New St. Germain, | Brown St. Germain.



Raised from the seed of the old St. Germain, nearly fifty years since, at the Prince Nurseries, Flushing, L. I. Tree, hardy, thrifty, very productive; the fruit keeps well, and requires no more care to ripen than apples, shoots, reddish brown.

Fruit, medium, oblong, obovate pyriform; *color*, green and pale yellow marbled, and covered nearly with brownish russet specks; *stem*, long, slender, (our drawing shows only a portion of it;) *cavity*, slight, narrow; *calyx*, with broad segments without divisions; *basin*, regular, even, not deep; *core*, small; *seeds*, oblong, ovate; *flesh*, white, juicy, melting, sweet, vinous. *Season*, December to March.

Rostiezer.

Foreign. Tree, strong upright grower, large foliage, dark olive-colored wood; an early, free, abundant bearer.

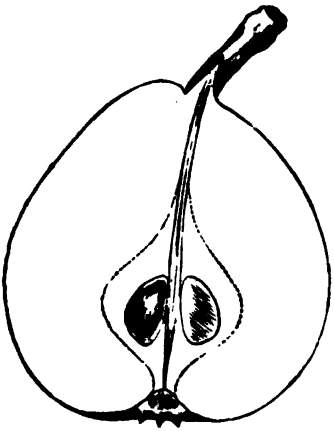
Fruit, below medium, obovate pyriform; *color*, dull green, reddish brown cheek in sun, whitish specks, and traces of thin russet; *stem*, long, slender, without depression; *calyx*, medium, open; *basin*, very shallow; *core*, small; *seeds*, ovate, pointed; *flesh*, juicy, melting, sweet, perfumed. *Season*, last of August.

Seckel.

Seckle, Sickle, | Sycle, New York Red Cheek, Red-cheeked Seckel,

The original tree of this variety, according to Dr. Brinckle, stands in Passyunk township, on the Delaware river, about three and a

half miles from Philadelphia. No one variety has become so generally known in this country as the Seckel, and in our Southern and Middle States, no one variety deserves so extended culture. North, it should, when possible, be planted in warm, rich, sandy loam, and sheltered situations. The tree is of slow growth; wood, short-jointed, stout, forming a round head, and of only medium size on the pear stock, and well suited to garden planting.



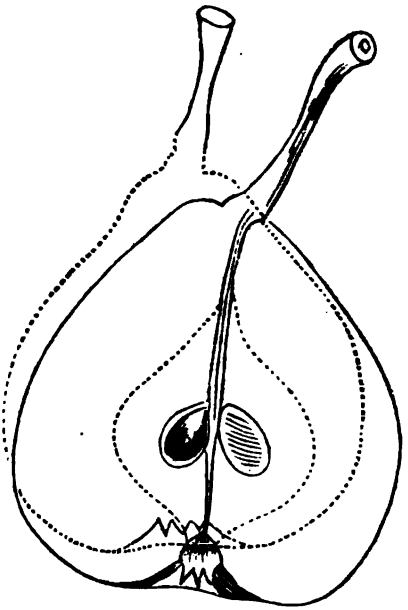
Fruit, small, (our drawing too small for a fair average.) rounded, obtuse pyriform; *color*, brownish green at first, becoming yellowish brown, with a lively red russet cheek; *stem*, short, slightly curved, set in a very slight depression; *calyx*, small, open; *basin*, shallow; *core*, small; *seeds*, broad, ovate; *flesh*, yellowish white, juicy, buttery, spicy, aromatic, sweet. *Season*, September and October.

St. Ghislain.

St. Galen.

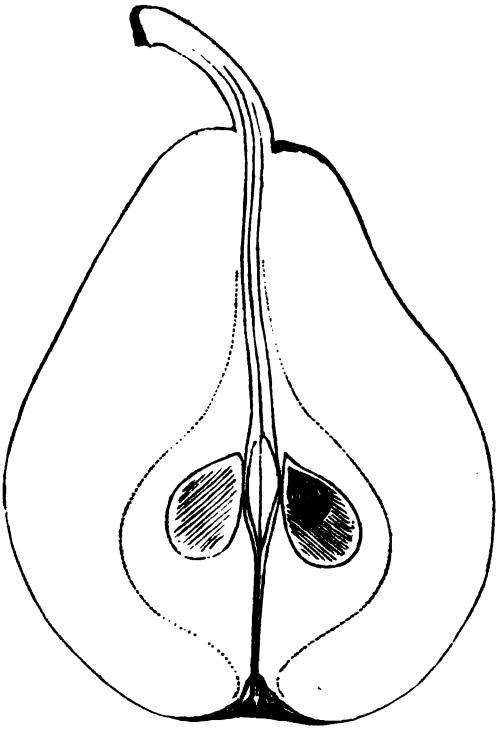
Foreign. Tree, upright, vigorous growth; young shoots, light brown; requires warm rich soil, otherwise a little insipid.

Fruit, below medium; generally pyriform, but varying; *color*, pale yellow or yellowish green, with dots of green underneath, and marblings of russet on surface; *stem*, generally curved; *calyx*, open; *basin*, shallow; *core*, small; *seeds*, obovate, pointed; *flesh*, white, buttery, juicy, and sprightly. *Season*, September.



Soldat d'Esperin—Esperin Soldier.

Soldat Laboureur d'Esperin



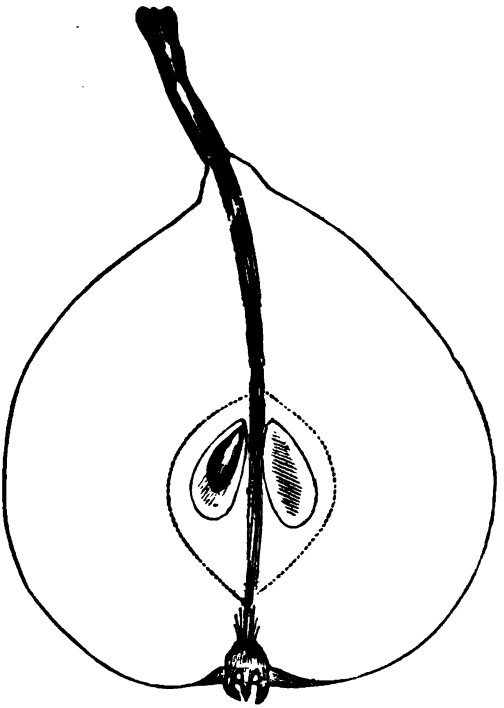
This variety is usually grown in this country under the name of Soldat Laboureur. It is entirely distinct from the "Soldat Laboureur" of the French, which is regarded as our Beurré d'Aremberg. It was grown by Major Esperin, of Malines; is of strong, vigorous, upright growth, yellowish brown wood, succeeding finely on the quince, producing abundantly, and its fruit well disseminated over the tree, always large and fair, but of only second-rate quality.

Fruit, large, generally oblong-obovate pyriform, sometimes obovate pyriform; *color*, greenish yellow, becoming yellow, with many patches, stripes and dots of russet; *stem*, short, stout, curved, in a slight round depression, or rather a raised lip one side; *calyx*, open, sometimes round, regular, and without divisions, others have stout persistent segments in divisions; *core*, compact, with outer concentric

lines; *seeds*, obovate; *flesh*, rather coarse, juicy, melting, perfumed, "very good." *Season*, December to February.

St. Andre.

Poire St André



Foreign. Tree, vigorous, healthy grower, early bearer.

Fruit, above medium, globular, acute pyriform, sometimes obovate pyriform; *color*, yellowish green, with dark green specks, rarely a brownish red cheek in sun; *stem*, medium, swollen or fleshy where it joins the fruit; *calyx*, medium, open, segments varying; *basin*, very shallow, sometimes slightly furrowed; *core*, small, compact; *seeds*, oblong, pointed, light brown; *flesh*, greenish white, fine-grained, buttery, juicy, sprightly, vinous, perfumed. *Season*, September.

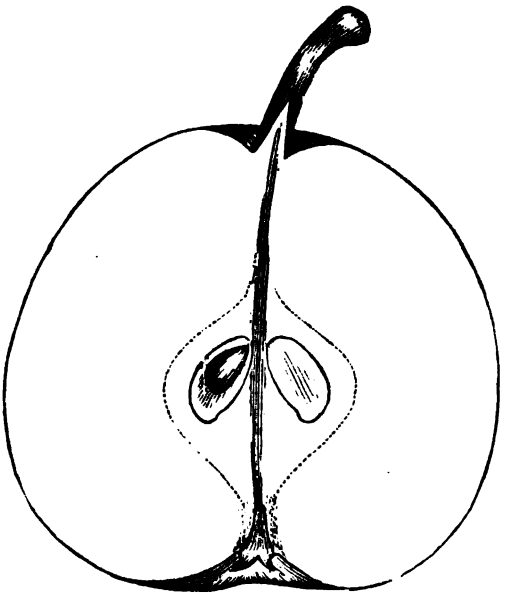
Stevens' Genesee.

Guernsey, | Stephens' Genesee.

Native of Rochester, N. Y. It is one of the most desirable of

pears for all collections, either on pear or quince; a fine grower, with diverging, dark gray shoots; productive.

Fruit, large, roundish obovate; *color*, greenish yellow, becoming yellow; *stem*, rather stout; *cavity*, narrow; *calyx*, with short, stiff,



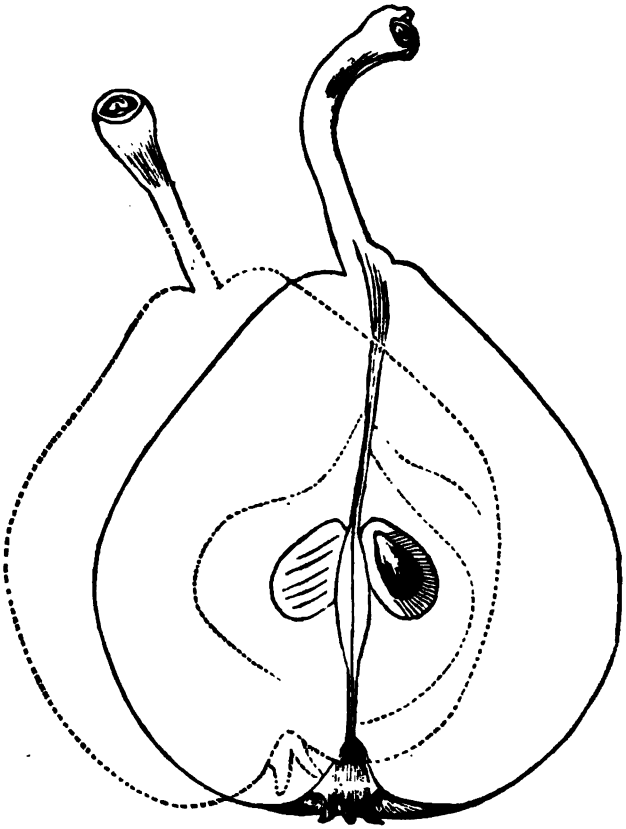
connected segments, half reflexed; *basin*, medium, regular; *core*, medium; *seeds*, ovate pyriform, blackish; *flesh*, white, half buttery, juicy, sweet, aromatic. *Season*, September. Even windfalls of this variety are extremely fine.

Summer Pineapple

Ananas d'Eté, | Ananas *of some*,
Poire Ananas.

Foreign. A superior variety that deserves extensive planting. Tree, vigorous, dark brown wood, early, regular bearer, fruit always large and excellent.

Fruit, large, oblong, obovate pyriform, angular; *color*, dull yellowish green, with much rough brown russet marbling; *stem*, largest at base, or where it joins the fruit, and with a lip one side; *calyx*, open, short divisions; *basin*, shallow, open; *core*, compact, capsules small; *seeds*, long ovate; *flesh*, whitish, fine-grained, buttery, melt



ing, sweet, perfumed. *Season*, last August and early September. This variety varies much in form. Our figures are from specimens from same tree.

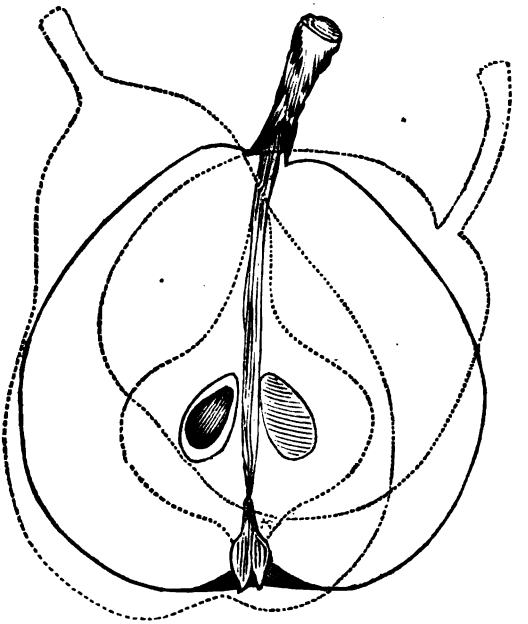
Surpasse Virgalieu.

Surpasse Virgalouse.

Origin uncertain, probably an American seedling, first disseminated by the late Andrew Parmentier, Brooklyn, N. Y. It is a regular abundant bearer on pear or quince, a vigorous, healthy tree, with yellowish brown wood, upright growth.

Fruit, medium, varying in form; (see our drawings, the specimens from which they were made all being pulled by ourself from the

same branch;) *color*, yellowish, with brownish red in sun, minute dots, and often sprinklings of russet; *calyx*, generally small, erect,



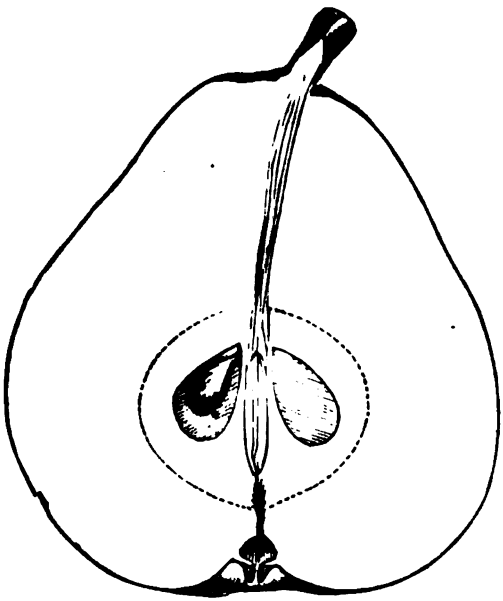
open; *basin*, slight; *stem*, varying; *core*, medium; *seeds*, broad ovate; *flesh*, white, fine-grained, buttery, juicy, aromatic. *Season*, October.

TYSON.

This fine variety was found in a hedge near Jenkintown, Pa., about 1792–4. The tree is of vigorous, upright growth, with reddish brown wood, a moderate, regular bearer.

Fruit, rather below medium, roundish pyriform, irregular; *color*, dull yellow, shaded with red in sun, little russeted, and with numerous black specks; *stem*, rather long, moderately stout, curved, and obliquely attached to the fruit by a fleshy junction, swollen on one side; *calyx*, open, with short segments; *basin*, round, shallow; *core* and *seeds*, small; *flesh*, white, fine-grained, melting, juicy, sugary, aromatic. *Season*, August.

Thompson's.



Foreign. Tree of vigorous, diverging habit; young wood, yellowish olive, with grayish specks; bears on the pear about the sixth year.

Fruit, large, obovate, obtuse pyriform, surface uneven; *color*, lemon yellow, with brownish red cheek in sun, some russet dots and marblings, and russet at the stem; *stem*, short, usually planted or set on angularly, with a fleshy rim one side; *calyx*, with connected half-closed segments; *basin*, round, narrow, abrupt; *core*, medium; *capsules* and *seeds*, formed like the fruit; *flesh*, white, buttery, melting, sugary, slightly aromatic. *Season*, October and November.

Urbaniste.

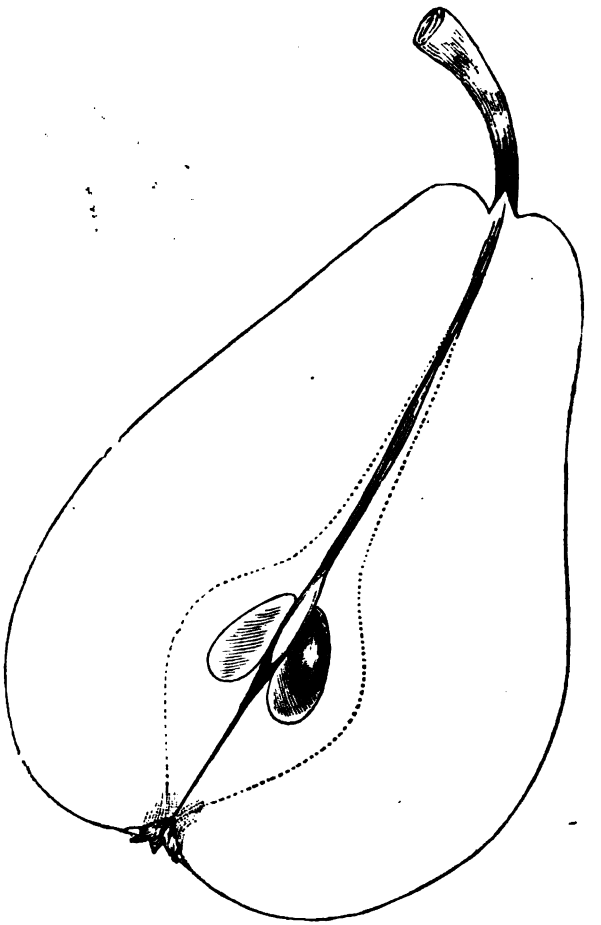
St. Marc, | Louise of Orleans,
Beurré Picquery.

Foreign. Moderately vigorous, healthy, hardy, well-suited to rich soils West; young shoots, upright, short-jointed, grayish yellow, not an early bearer, but when in bearing produces regularly and abundant.

Fruit, medium, obovate pyriform; *color*, pale yellow, with gray dots, and a few russet streaks; *stem*, about an inch long, rather stout; *cavity*, shallow; *calyx*, small, generally closed; *basin*, narrow, abrupt; *core*, medium or small; *seeds*, obovate pointed; *flesh*, white, yellowish at core, buttery, melting, vinous. *Season*, October and November.

Van Mons' Leon Le Clerc.

Poire de Boulogne, | Louise Bonne de Boulogne,
Celestin.



Foreign. Distinct from "Leon Le Clerc of Van Mons." A valuable variety on the quince, bearing early and abundantly, and of the largest size fruit. In growth the tree is moderately vigorous, nearly upright, yellowish olive wood, with round grayish spots.

Fruit, very large, oblong, obovate pyriform; *color*, pale yellow, golden at maturity, with brown in sun, russet specks and patches,

some dark green dots, and russet at base of stem; *stem*, medium length and size, curved; *calyx*, large, open, broad, reflexed segments; *basin*, medium; *core*, medium, long ovate capsules; *seeds*, long ovate, sometimes imperfect; *flesh*, yellowish white, fine, buttery, melting, juicy, sugary, vinous. *Season*, October and November.

Vicar of Winkfield.

Vicar of Wakefield,
Le Curé,
Monsieur Le Curé,
Dumas,

Belle Epine Dumas,
Clion,
Epine Dumas,
Duc de Bordeaux

Foreign. First found growing wild in a wood by M. Clion, a

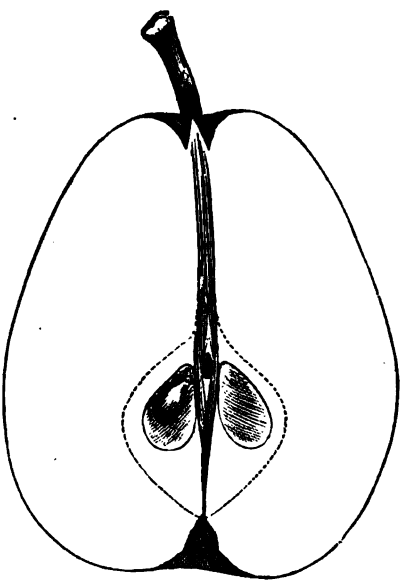
French curate; hence the names, Clion, Le Curé, &c.; afterwards it was grown in a garden at Winkfield, Berkshire, by Rev. Dr. Rham, and received the name of Vicar of Winkfield, concentrating the two associations in the one name, and which, being of our own language, is to be preferred. It is a most profitable variety, grown on the quince stock, and although only second quality, it is always fair and large. Tree, a vigorous grower, with large, roundish, glossy leaves; shoots, diverging, dark olive color.

Fruit, large, oblong, obovate pyriform; *color*, dull pale green at first, becoming pale yellow, with sometimes a brownish cheek, marked with brown dots over the whole surface; *calyx*, with open reflexed segments; *stem*, an inch or more long, rather slender, obliquely inserted without depression; *core*, small; *seeds*, oblong ovate; *flesh*, greenish white, juicy, sprightly, "very good." *Season*, November to January.

WASHINGTON.

Robertson.

American. Native of Delaware. Tree of healthy, moderate growth, with slender, diverging, reddish brown shoots; an annual bearer.



Fruit, medium, roundish ovate, or ovate pyriform; *color*, lemon yellow, tinged in sun with red and reddish russet, and near the stem, patches of clear russet; *stem*, an inch long, inserted in a narrow cavity, sometimes almost obsolete, and then there is a fleshy lip one side of stem; *calyx*, small, long pointed segments; *basin*, round, regular; *core*, rather small, lying near the apex; *seeds*, obovate pyriform, blackish; *flesh*, white, juicy, sweet. *Season*, September.

VAN ASSCHE.

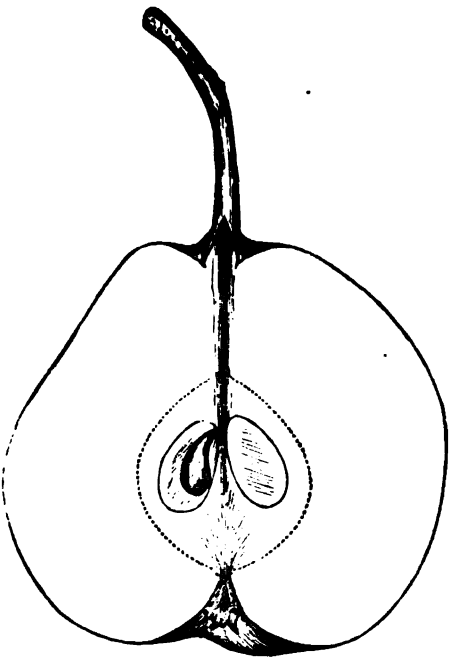
Van Assene. | Vanassé,
Van Asshe.

This is a new pear, not yet fruited at the West, but we have eaten

of it East, and have no hesitation in placing as among those worthy general culture. We copy our description from Mr. Barry, in the Horticulturist of February, 1853: "Tree a vigorous, erect grower, dark shoots, an abundant and early bearer, succeeding well on the quince. *Fruit*, large, obovate obtuse, largest near the eye, flattened at both ends, occasionally slightly ribbed; *calyx*, small; *basin*, smooth, wide, rather shallow; *stem*, one and a half inch long, rather slender, slightly sunk; *skin*, smooth and fair, light yellow in the shade, sprinkled with dark dots, light red on the sunny side, sprinkled with carmine dots; *flesh*, white, buttery, melting. *Season*, September and early October.

Winter Nelis.

Nellis d'Hiver,
Bonne de Malines,
Beurré de Malines,
La Bonne Malinoise,
Milanaise Cuvelier,
Etourneau.



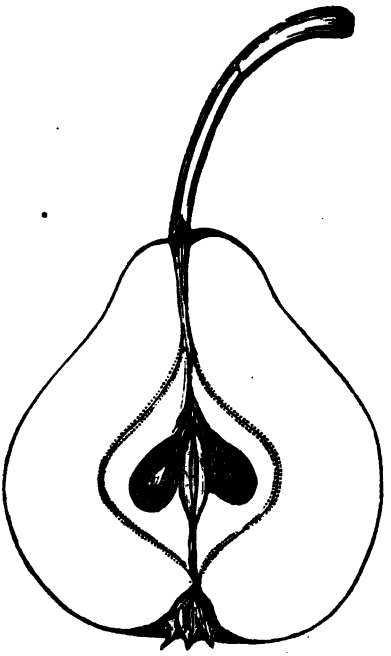
Foreign. As a standard winter pear, if we were to select but the one, it would be this variety. The tree is vigorous, though with slender diverging shoots; very hardy; an early prolific bearer on

pear or quince. It requires rich, strong soil to produce good-sized fruit, and is well suited to extensive planting on our Western lands.

Fruit, medium, roundish obovate, narrowing towards the stalk; *color*, yellowish green, much covered and dotted with gray russet; *stem*, rather long, a little curved; *cavity*, narrow; *calyx*, open, with short segments; *basin*, shallow; *core*, medium; *capsules*, ovate; *seeds*, oblong pyriform, curved; *flesh*, yellowish white, buttery, melting, sugary, aromatic. *Season*, November to middle January.

Zoar Beauty.

Zoar Seedling.



American. Native of Ohio. Tree, vigorous grower; dark brown shoots; early and abundant bearer.

Fruit, a little below medium, varying in form, usually as seen in our engraving; *color*, light yellow, with greenish spots; red in the sun, with deep red spots; *stem*, generally long, slender, curved, plaited, with slight depression one side; *calyx*, large, for size of fruit; *basin*, shallow; *core*, medium; *seeds*, obovate, or broad ovate; *flesh*, yellowish white, a little coarse, juicy, sweet. *Season*, early August.

CLASS II.—*New and untested, suited to certain localities or gardens of Amateurs.*

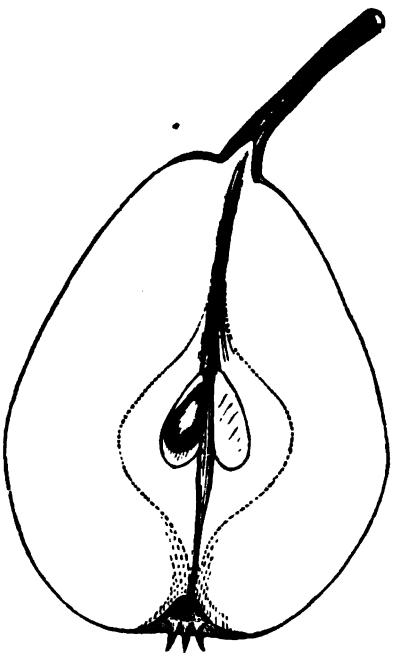
ALPHA.

Foreign. Very productive. Fruit, medium, oblong obovate, pale yellowish green, with reddish dots, brown blush; flesh, white, fine-grained, buttery, "very good." October.

ABBOTT.

From Providence, R. I. Fruit, medium, oblong obovate, dark green, reddish brown cheek; calyx, small; flesh, melting, sugary, sprightly, Middle to last September.

ANDREW'S.



American. An early bearer, a little disposed to decay at core, otherwise highly desirable. Fruit, large, (our drawing too small for an average,) roundish, ovate pyriform, yellowish green, dull red cheek, scattered dots

and russet patches; calyx, open; segments, long, half reflexed; basin, small; stem, one to one and a quarter inch, curved, often set without depression; flesh, greenish white, juicy, vinous, nearly "best." September.

Adele de St. Denis.

Foreign. New. Fruit, above medium, obovate, irregular, yellow, covered with russet; calyx, open, broad segments; flesh, melting, juicy. October.

Althorpe Crassane.

Foreign. Quality variable; fruit, medium, roundish obovate, rough, pale green, with dark green suffused dots, and spots of russet, tinge of brown; flesh, white, buttery, juicy, rather coarse, "very good." October and November.

Autumn Paradise.

Paradise d'Automne.

Foreign. This is esteemed by many eastern writers as superior even to the Beurré Bosc, which it much resembles. Tree, of very vigorous growth, shoots at first upright, afterwards straggling and pendulous; wood, reddish brown, with large whitish gray specks, very productive. Fruit, large, obovate, acute pyriform, irregular and uneven surface; color, dull yellow, covered with bright russet, deepening on the sunny side, calyx, rather large, open; segments, reflexed; basin, furrowed; stem, about one and a half inch long, rather slender, obliquely attached to the fruit by a fleshy, and oftentimes wrinkled base; core, small; seeds, long-pointed; flesh, yellowish white, rather coarse, buttery, melting, juicy, delicious. September and October.

Bankerbine.

Foreign. The specimens from which we describe were from Messrs. Ellwanger & Barry. Fruit, medium, obovate, greenish yellow, with small russet dots; stem, stout; calyx, open, broad segments; core, large; flesh, breaking, coarse. October.

Belle Excellent.

Foreign. Resembles Louise Bonne of Jersey; oblong pyriform, yellow, red blush, with raised specks on surface. October.

Belle de Noel.

Belle apres Noel.

Foreign. Fruit, rather below medium, obovate, obtuse pyriform, pale greenish yellow, with few russet spots, dark red cheek, with carmine dots; calyx, medium; segments, half reflexed; basin, shallow, slightly furrowed; core, large; flesh, whitish, melting, juicy, "very good." December.

Belle de Bruxelles.

Belle of Brussels, | Belle d'Aout.

Foreign. Variable. Fruit, large, obovate pyriform, deep yellow, greenish dots, tinge of red in sun; flesh, white, sweet. August.

Belle Julie.

Foreign. Tree, upright grower; fruit, medium, long ovate, yellowish green, cinnamon russet, bronzed red in sun; stem, short, stout; calyx, medium, reflexed; flesh, greenish white, juicy, "very good." October and November. (Hov. Mag.)

Belle Canaise.

Elisa d'Heyst.

Foreign. Fruit, below medium, globular, obovate, pale greenish yellow, with dirty green or brown specks; stem, slender; calyx, open; flesh, white, coarse-grained, juicy, "good." February to March.

Belle de Thouars.

Foreign. Fruit, medium, pyriform, angular, rich brown russet; short stem; cavity, little plaited; calyx, half open; shallow basin; core, small; seeds, ovate; flesh, white, tender, juicy, "very good." October and November.

Beurre Brown.

Beurré Gris,	Beurré d'Or,
Beurré Rouge,	Beurré Dorée,
Beurré,	Beurré d'Amboise,
Golden Beurré,	Beurré d'Ambleuse,
Gray Beurré,	Beurré du Roi,
Beurré Vert,	Poire d'Amboise,
Badham's,	Isambert,

Isambert le Bon.

An old variety; does finely in warm rich soil, but a peculiar vinous taste, not admired by every person. Fruit, medium, oblong obovate, yellowish green, with thin russet, reddish brown in sun; flesh, greenish white, melting, juicy, vinous, sub-acid. September.

Beurre Suisse.

Foreign. Fruit, medium, obovate oblong, striped green, red, and yellow; only desirable as a curiosity. October.

Beurre Beaulieu.

Foreign. Fruit, above medium, obovate pyriform, yellow, with russet spots and blotches; short stout stem; calyx, open; basin, shallow; flesh, white, juicy. October.

Beurre de Rhine.

Foreign. Fruit, large, pyriform, irregular; stem, stout; calyx, open; basin, shallow, light yellow, rough spots; flesh, white, rather coarse, "good." October and November. Grows well on quince.

Beurre Crapaud.

Foreign. Vigorous and productive on pear or quince, fine for extreme

northern sections, proving hardy. Fruit, medium, roundish obovate, deep yellow, red in sun, small russet dots; stem, stout, curved; calyx, partially closed; core, large; flesh, yellowish, melting, sugary, juicy, "very good." October.

Beurre Charron.

Foreign. Fruit, medium, roundish, greenish yellow; stem, long; calyx, small, closed; basin, deep; flesh, juicy, melting, buttery, "best." October. (T. S. H. & Co.)

Beurre de Beaumont.

Foreign. Fruit, medium, roundish obovate, yellowish green, brownish red in sun, covered with dark green or russety specks; stem, short; calyx, closed; flesh, white, buttery, juicy, sweet, "very good." Last September.

Beurre Preble.

American. Fruit, large, oblong obovate, greenish yellow, with russet and green spots; flesh, white, buttery, "very good." October and November.

Beurre-Mollett's Guernsey.

Mollett's Guernsey Chaumontelle.

Foreign. Fruit, medium, ovate pyriform, yellowish green, with dark brown, russet in sun; calyx, large; stem, stout; flesh, yellowish, melting, vinous, "very good." December.

Beurre de Ranz.

Beurré Rance, | Beurré de Flanders,
Beurré Epine, | Hardenpont du Printemps,
Beurré Noirchain.

Foreign. Very variable, rarely "very good." Tree, a straggling, pendulous habit. Fruit, large, oblong, obtuse pyriform, dark green, bronzed in sun, russet at crown, russet dots over surface; stem, long; calyx, open; core, small; flesh, greenish white, coarse, juicy. December to April.

Beurre Kossuth.

Foreign. New. Fruit, large, turbinate rounded, surface uneven; stem curved, inserted upon a little projection; calyx, in divisions, dull yellowish green, traced and dotted with gray bronze, yellowish at crown, greenish at stem; flesh, fine, buttery, sugary, juice acidulated. (Hov. Mag.)

Beurre Gifford.

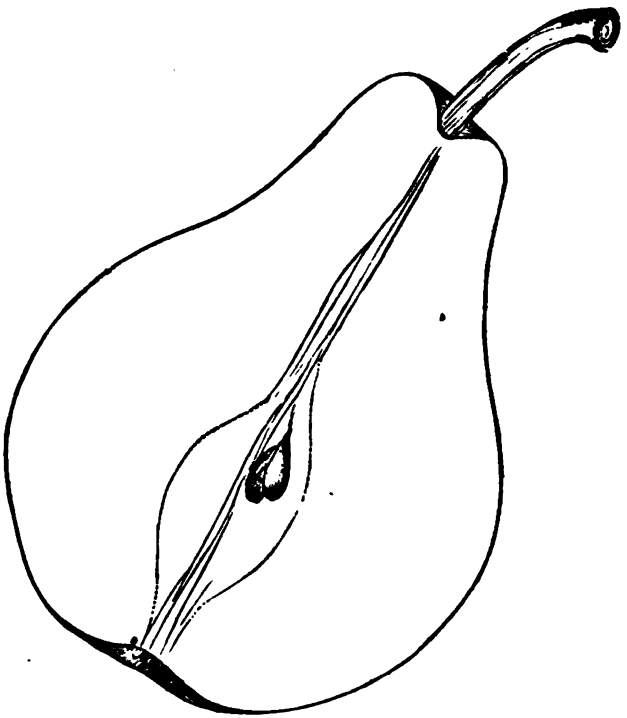
Beurré Gifford.

Foreign. Tree, moderate grower, long slender shoots, dark reddish, good bearer on quince or pear. Fruit, medium, pyriform, yellowish green to pale yellow, red in sun, pale russet specks; stem, long, slender, curved·

calyx, open; core, small; flesh, white, melting, juicy, vinous, "very good." Last of August. (Hov. Mag.)

Beurre Moire.

Beurré Moire.



Foreign. Tree, vigorous, upright grower, early, productive bearer, often blossoms the second time in a season, and sets fruit, which of course does not mature; new, promises well. Fruit, large, obovate, oblong pyriform, pale green, with dots of darker green, and occasionally a russet patch; stem, one inch, stout, slight lip on one side of depression; calyx, small; short stiff segments; core, small; seeds, imperfect; skin, thick, harsh; flesh, white, juicy, vinous, half melting, sprightly, "very good." November and December.

Beurre d'Amalis.

Beurré d'Amanlis, | Beurré d'Amaulis.

Foreign. A free, vigorous grower on pear or quince; said to bear well:

our experience has been the reverse. Fruit, large, ovate obovate, dull yellowish green, with reddish brown cheek, brown dots, russet patches; stem, long, obliquely set; calyx, open; basin, shallow; flesh, yellowish, a little coarse, often austere, "very good." Early September.

There is also a striped Beurré d'Amalis, differing not materially, except in being striped red, yellow, and green.

Beurre Nantais.

Foreign. Fruit, large, oblong pyriform, pale yellow, russet dots; flesh, melting, juicy. September. (Hov. Mag.)

Beurre Superfine.

Foreign. Fruit, large, pale green, traces and patches of russet, dull brownish cheek; flesh, juicy, melting, slight aroma, "very good." Middle to last October. (Wilder, in Hort.)

Beurre Van Marum.

Foreign. A very early and productive bearer on pear; the fruit always fair. Fruit, large, oblong pyriform, dull greenish yellow; stem, long; calyx, large; flesh, white, hardly "good;" its bearing its recommendation. October.

Beurre Bachelier.

Foreign. Fruit, very large, oblong, obovate pyriform, greenish yellow; stem, stout; cavity, deep; flesh, firm, sugary. December. (Hov. Mag.)

Beurre Millet.

Foreign. Fruit, medium, roundish, obtuse pyriform; pale yellow, with large pale russet specks; stem, short, stout; calyx, small, open; core, small; flesh, yellowish white, melting, juicy, vinous. November to January. (Hov. Mag.)

Beurre Brettouneau.

Beurré Bretouneau.

Foreign. Does not succeed on the quince; very fine on pear; very hardy, thorny wood. Fruit, large, obovate, obtuse pyriform, yellow, dotted with russet; flesh, melting, juicy, sugary. February to April. (Rivers, in Hort.)

Beurre de Waterloo.

Foreign. Fruit, large, obovate, obtuse pyriform, dull green, rough skin, covered with coarse russet traces and points; calyx, open; basin, furrowed; flesh, melting, juicy, sprightly, saccharine. Middle October. (Wilder, in Hort.)

Beurre Audosson.

Foreign. Fruit, medium, obovate, acute pyriform, yellowish green at maturity, dull red cheek in sun, and numerous russet dots; stem, short,

stout; calyx, large, open; flesh, melting, tender, juicy, "very good." October. (Wilder, in Hort.)

Beurre Sprin.

Foreign. Fruit, large, ovate pyriform, yellow, with patches, tracings and dots of russet; stem, short, swollen at base, obliquely inserted, slight lip; calyx, small, with segments united; core, medium; seeds, large; flesh, yellowish white, a little coarse, melting, juicy, "very good." October. We should not be surprised if this proved Marie Louise.

Beurre Sterkman.

Foreign. Tree, vigorous, large strong shoots; succeeds on quince or pear. Fruit, medium, obtuse pyriform, dull greenish ground, nearly covered with russet; stem, short, stout; calyx, open; flesh, white, melting, juicy, sub-acid. October.

Beurre Clairgeau.

Foreign. Tree, vigorous, light yellow wood. Fruit, large, oblong, obovate pyriform; color, mostly russet, reddish in sun; stem, short, stout; calyx, small, open; flesh, yellowish, rather coarse, juicy, vinous, "very good." October, November. This will probably prove one of the most valuable, as a large-sized, first quality pear, and desirable as an orchard variety, on the pear root. It is yet quite new.

Beau Present d'Artois.

Foreign. Fruit, large, oblong, obovate pyriform, gray and green spotted; stem, large, short; calyx, short, broad; flesh, white, with green lines, tender, juicy, sugary. September. (Hov. Mag.)

Bergamotte d'Esperin.

Foreign. Fruit, medium, roundish, dull green, with dots and patches of russet; calyx, closed; basin, furrowed; flesh, buttery, melting, juicy, sweet, "very good," very productive in clusters. December to February.

Bergamotte Gaudry.

Foreign. Fruit, medium, roundish, yellowish green, with russet dots; flesh, white, tender, juicy, "good." November.

Bergamotte Cadette.

Beurré Beauchamps, | Beauchamps,
Poire de Cadet.

Foreign. Fruit, hardly medium, roundish obovate, pale green, rarely little red in sun; stem, long, stout; calyx, small, closed; flesh, buttery, juicy, sweet; requires care in ripening. October to December.

Bezi Sanspareil.

Foreign. Fruit, small, globular, obtuse pyriform, dull greenish yellow

much russet, and in sun, a little crimson; stem, long; cavity, deep; calyx, open; segments, long; core, medium; seeds, purplish black; flesh, yellowish white, melting, juicy, aromatic, "very good," if not "best." February to March.

Bezi de Naples.

Foreign. Fruit, medium, ovate obovate, light yellowish green, with blotches and stripes of darker hue, occasional russet patches and dots; stem, stout; calyx, small; basin, furrowed; flesh, fine, buttery, juicy, sweet, "very good." Last September.

Bezi de Montigny.

Trouvé de Montigny, | Doyenné Musque.

Foreign. Tree, vigorous, brownish olive wood. Fruit, medium, obovate, yellowish green, with russet specks and dots; stem, long, curved, rather stout; calyx, small, open, reflexed; core, large; flesh, white, fine, melting, juicy, sugary. October.

Bezi de la Motte.

Bein Armudi, | Beurré Blanc de Jersey.

Foreign. A vigorous, hardy sort, well suited to orcharding. Fruit, medium, obovate rounded, yellowish green, with many small russet dots; stem, short, rather stout, slightly curved; calyx, small, open, reflexed segments; core, medium; seeds, plump, ovate; flesh, yellowish white, rather coarse, sugary, juicy, melting, "very good." October.

Bezi d'Esperin.

Foreign. Fruit, large, turbinate, melting, "very good;" good bearer. December to January. (Rivers, in Hort.)

Baronne de Mello.

Foreign. Grows fine and bears abundantly on quince. Fruit, medium, obovate, acute pyriform, yellowish russet; stem, short, stout, fleshy at base; flesh, greenish white, melting, juicy, sub-acid, "very good." Middle October. (Wilder, in Hort.)

Benoist Nouveau.

Foreign. The specimen from which we describe was received from Messrs. Ellwanger & Barry. Fruit, medium, roundish obovate, greenish yellow, brown cheek, dull russet marblings, and indistinct brown specks; stem, stout; cavity, deep, narrow; calyx, open; core, small; seeds, long, ovate, pointed; flesh, breaking, juicy, rather astringent, requires careful ripening. February to April.

The "Benoist" of Rivers is large, and ripe in August; and a "Beurré Benoist" said to ripen in October; we have not seen them.

Bloodgood.

American. From Flushing, L. I. It has not, as grown West, merited its eastern reputation. The tree is a moderate grower, with reddish brown, short-jointed wood; a regular bearer. We think it requires a rich, deep, warm soil to produce good-flavored fruit. Fruit medium, or below, ovate obovate, yellow, with russet marblings and dots; calyx, open; stem, fleshy at base; core, small; flesh, yellowish white, melting, "very good." Early August.

Bordenave.

Smith's Bordenave.

The original name lost, and this given to it by Alfred Smith, Esq., of Hartford, Connecticut, who imported it from France. Fruit medium, acute pyriform, dull greenish russet; flesh juicy, buttery, sprightly, "very good." September.

Bonne des Zees.

Bon d'Esee, | Bonne des Haies.

Foreign. Tree of short stocky habit; wood yellowish; fruit large, obtuse pyriform, light yellow and pale red, and somewhat russeted; stem rather short, uneven, calyx partly closed, short segments; core large; flesh yellowish white, melting, juicy, sugary, "very good." September.

Bon Chretien Fondante.

Foreign. Tree vigorous, hardy, productive on quince or pear; fruit medium, roundish, oblong, oval, yellowish green, brownish red in sun, and much russet; stem medium, curved; calyx small, partly closed; basin furrowed; core large; flesh white, coarse, melting, juicy, a little gritty, "very good." September, October.

Brandes St. Germain.

Foreign. Considering its season, R. Manning, Esq., considers this a very desirable variety; tree moderate grower, succeeding finely on quince, very productive; fruit medium, oblong oval, brownish yellow, with smooth russet; stem short, stout, calyx small; flesh juicy, vinous, "very good." November, December.

Brougham.

Foreign. Fruit below medium, obovate, yellowish russet; stem short, calyx open; flesh yellowish white, a little gritty, buttery, sugary, "very good." November.

Bringewood.

Foreign. Fruit medium, pyriform, yellowish brown and russet; stem long and slender; calyx open, prominent; flesh yellowish white, gritty at core, the rest buttery, "very good." November. (Hov. Mag.)

Brielmont.

Foreign. Fruit medium, obovate oblong, angular, yellow, with greenish and russet specks; calyx prominent; basin open; flesh white, melting, "good." October.

Bradnell.

Bradnell's Seedling.

Foreign. Tree vigorous, abundant bearer; shoots long, bright chestnut color, white dots; fruit middle-sized, turbinate, stalk short; eye a little open; skin pale yellowish green on the shaded side, red next the sun, much speckled with whitish gray dots; flesh melting, exceedingly juicy. Last September.

Caen du France.

Foreign. Fruit medium, roundish obovate, mostly yellowish russet and reddish dots; stem rather long; calyx open; flesh fine, juicy, sweet, "very good." December, January.

Capiaumont.

Beurré Capiaumont, | Beurré Coloma.

Foreign. This is a profitable orchard and market variety, on pear or quince. A free grower; branches grayish yellow; fruit medium, globular, acute pyriform, yellow, with cinnamon red cheek, and russet dots and streaks; stem curved; calyx large; flesh buttery, sweet, a little astringent, "very good." September, October.

Calhoun.

American. Native of New Haven, Conn.; fruit medium, roundish, yellow, with much of russet traced and dotted; stem short; calyx small; core medium; flesh yellowish white, melting, juicy, "very good." October, November.

Capsheaf.

American. Native of Rhode Island. Tree hardy, wood yellowish; fruit medium, roundish obovate, yellow, mostly covered with cinnamon russet; stem short; calyx closed; core large; flesh yellowish white, fine, melting, juicy, sweet, "very good." October.

Catinka.

Foreign. New. Fruit large, oblong pyriform, yellowish; flesh fine, juicy, "very good," and will probably prove "best." We have only seen it once. November.

Canandaigua.

Catharine.

American. From Central New York; fruit large, resembling Bartlett;

flesh white, fine, juicy, "very good." September. A new variety; tree vigorous, upright grower, thus far doing well on quince or pear, productive

Calebasse d'Ete.

Summer Calebasse.

Foreign. Tree vigorous; foliage light green; fruit above medium, oblong pyriform, irregular, dull green, little brown in sun, russet at stem and eye; stem long; calyx small; core small; seeds long; flesh white, fine, buttery, juicy, sugary, perfumed. Last August. (Hov. Mag.)

Chaptal.

Beurré Chaptal.

Foreign. Fruit medium or above, roundish, ovate obovate, greenish yellow; stem curved; cavity slight; calyx large, open; basin shallow; core medium; seeds oblong; flesh white, breaking, juicy, "very good." December, January.

Chancellor.

Green's Germantown, | Early St. Germain.

Probably a native of Pennsylvania. Tree healthy, abundant bearer, young wood slender, yellowish brown; fruit large, oblong obovate pyriform, green, with minute brown specks and some russet blotches, rarely a faint brown cheek; stem one inch long, rather thick, cavity small, irregular; calyx small, basin contracted; core medium; seeds long, yellowish brown; flesh melting, "very good." Last September. (Brinckle, in Hort.)

Charles Van Mons.

Foreign. Fruit below medium, obovate obtuse pyriform, yellowish green, brownish red cheek, and russet dots; stem slender, curved, depression one side; calyx large, open; segments broad, completely reflexed; basin shallow; core medium; seeds obovate pyriform; flesh whitish, melting, juicy, vinous, "very good," if not "best." January.

Charles Van Hoogten.

Foreign. Fruit above medium, obovate acute pyriform, dull pale yellow; stem stout, enlarged at base; calyx open; segments short; flesh yellowish white, melting, juicy, "very good." Early October (Wilder, in Hort.)

Christmas.

Noel.

American. New, from Cincinnati, Ohio. Fruit medium, ovate rounded; skin rough, bronzed, russety; stem stout, slight depression; calyx small; basin shallow; flesh a little gritty, juicy, sweet, "very good." December, January. (Warder's notes.)

Chaumontel.

Beni de Chaumontelle, Beurré d'Hiver, | Winter Beurré. Oxford Chaumontel.

Foreign. Requires rich warm soil. Fruit large, oblong obovate; skin rough, yellowish, brownish red in sun, russet dots; stem one inch, curved; calyx medium; basin deep; core small; seeds flattened; flesh buttery, melting, "very good." November, January.

Conseiller Ramuez.

Foreign. Fruit medium, obovate obtuse pyriform, dull green, clouded and traced with russet; flesh melting, tender, "good." October. (Wilder, in Hort.)

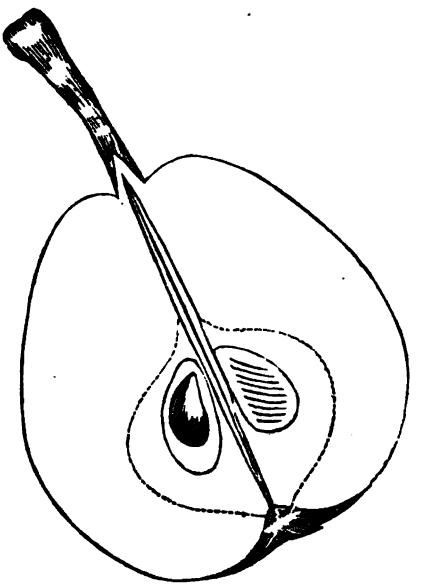
Colmar Neill.

Foreign. Fruit large, obovate, pale yellow; flesh white, buttery, melting, "good." October.

Countess of Lunay.

Comtesse de Lunay.

Foreign. Tree vigorous; very productive on quince; has been much disseminated as "Doyenné d'Eté." Fruit medium, (our drawing too small,) roundish obovate; skin smooth, pale yellow, often thinly sprinkled with red in sun, some russet specks, and russet at base of stem; stem long, largest where it joins the tree; cavity slight, often a little lip one side of stem; calyx large, open, with long reflexed segments; core medium; seeds brown; flesh white, rather coarse, melting, juicy, "very good." October.



Compte de Lamy.

Beurré Curté, | Dingler,
Marie Louise the Second.

Foreign. Not equal to the foregoing; tree upright; fruit medium, roundish obovate, yellow, brownish red cheek, small russet dots; stem long, calyx small; flesh white, fine-grained, buttery, "good." Early October.

Collins.

Watertown

American. From Watertown, Massachusetts; supposed a seedling of white Doyenné; a regular, abundant bearer. Fruit large or above medium, roundish obovate, yellowish green, mottled with dull red in sun, some russet; stem short, curved; calyx large, open; core large; flesh white, vinous, juicy, sweet, melting, "best." September.

Colmar Epine.

Foreign. Fruit large, roundish obtuse, oblong, dull green with cloudings of darker hue; flesh white, melting, vinous, juicy, "very good." September.

Coter.

Foreign. Tree healthy, young wood, short-jointed, light yellow; fruit medium, regular obovate, pale green; flesh fine-grained, tender, melting, juicy, "very good." November.

Citron.

American. Native of New Haven, Conn. Fruit medium, roundish obovate, dull green, sprinkled with small russety dots; flesh a little coarse, greenish white, melting, juicy, "very good." Last August.

Cross.

Winter Cross.

American. From Massachusetts. Tree hardy, slender, grayish yellow wood; fruit, medium, roundish obovate, deep yellow, with russet dots and patches; stem stout; calyx small; flesh white, melting, juicy, "very good." November, January.

Cushing.

American. Native of Hingham, Mass. Tree hardy, of slender diverging growth; fruit medium, ovate obovate, light greenish yellow, small gray dots, dull red cheek; calyx small; stem one inch long; flesh white, fine-grained, melting, sweet, "very good." September.

Dallas.

American. From New Haven, Conn. Fruit medium, roundish obovate, dull yellow, mostly covered with red russet; stem medium,

calyx large, open; core rather small; flesh yellowish white, melting, juicy, vinous, "very good." November.

De Louvain.

Poire de Louvain.

Foreign. Fruit large, obovate acute pyriform, dull greenish yellow, rough russet dots and patches; stem long, medium size, curved; calyx large; basin shallow; core medium; seeds blackish; flesh greenish white, crisp, juicy, astringent, valuable only for baking. January, March.

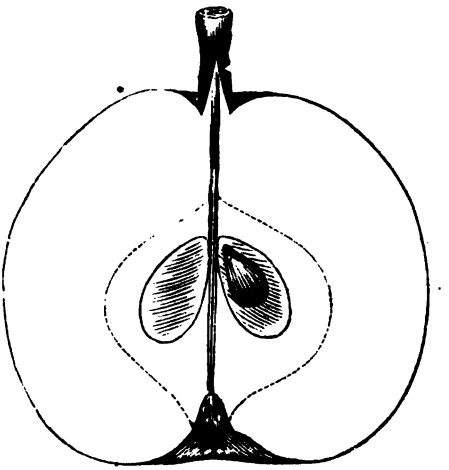
Des Nonnes.

Des Nonea.

Foreign. New: fruit medium, turbinate, clear light yellow, many small brown dots; stem long, slender; calyx small, closed; basin shallow; flesh whitish, melting, juicy, sweet, perfumed, "very good," perhaps "best." September. (Hort.)

Delices d'Hardenpont.

Délices d'Ardenpont. | Délice d'Hardenpont *of Angers.*



Foreign. Tree, hardy, moderate grower; shoots, upright, yellowish brown, good bearer, deserves more attention. Fruit, medium, roundish, pale yellow, with many gray dots and russet in sun; stem, varying; calyx, small, closed; basin, round, slightly uneven; core, medium; seeds, broad, ovate; flesh, whitish, buttery, melting, juicy, almost "best." October.

Delices d'Hardenpont du Nord and Belgium.

Fondante Pariselle du Cornice Horticule, | Beurré Curtet *of A. Leroy.*

Foreign. Fruit, large, pyriform, yellow, gray spotted; calyx, small; flesh, coarse, melting, sugary, "good." October. (Hov. Mag.)

Delices de Mons.

Foreign. Fruit, medium, pyriform, uneven surface; stem, half inch long; calyx, small; skin, yellowish green in shade, russet in sun, dotted and spotted with gray; flesh, yellowish, melting, juicy, perfumed, "very good." September, October. (Hov. Mag.)

Delices Charles Van Mons.

Foreign. Fruit, large, medium pyriform; skin, fine, lemon yellow, thinly washed with russet, quite like the Golden Beurré. which it also resembles in size and shape; stalk, an inch and a quarter long, inserted without depression; calyx, small, open, and placed in a narrow and shallow basin; flesh, melting, vinous, juicy, and refreshing. Tested by us for the first time, 20th September, 1853. Description by Thorp, Smith & Co., of Syracuse.

Diller.

Probably a native of Pennsylvania; new. Tree, moderately vigorous; wood, short-jointed, reddish brown, a regular and abundant bearer. Fruit, medium, ovate obovate, angular, golden yellow, sprinkled, and in sun, mostly covered with light cinnamon russet; calyx, open; basin, shallow; core, small; seeds, long, black, pointed: flesh, yellowish white, buttery, sugary, "very good," or "best." September. We saw this fruit at the Am. Pom. Society meeting, 1852, and have no doubt it will eventually take first class position. It must not be confounded with the Dillen, a foreign variety.

Dillen.

Dillon, | Doyenné Dillen.

Foreign. This has been heretofore considered a synonym of Beurré Diel; it, however, proves distinct. Tree, not vigorous, branches erect, diverging, grayish rough wood. Fruit large, obovate, obtuse pyriform, greenish yellow, russet at stem; stem, short; calyx, small; flesh, fine, melting, tender, juicy, vinous. October, November. (Hov. Mag)

De Sorlus.

Foreign. New. Tree, vigorous; branches, straight, erect, compact; wood, yellowish, grayish, white dots, free bearer. Fruit large, turbinate; stem, one side, short, curved; calyx, small, closed; color, yellowish green, gray russet, marbled most at stem; flesh, white, melting, juicy. October, December. (Hov. Mag.)

Doyenne Rose.

Foreign. Fruit, above medium, oblong, ovate pyriform, yellow, blush red cheek, patches and dots of russet; stem, stout, set without depression; calyx, with short, stiff segments; core, small; flesh, white, coarse, juicy, "good." October.

Doyenne Robin.

Foreign. Fruit, rather large, bergamot-shaped, greenish, covered with russet dots and splashes; stem, usually very long and thick, deep, narrow cavity; calyx, small, narrow, moderately deep basin; seed, large, black; flesh, melting, somewhat granular; flavor, pleasant; quality, "very good." September.

Doyenne Sieulle.

Beurré Sieulle, | Sieulle

Foreign. A variety requiring high culture; does best on quince, under garden culture. Fruit, above medium, roundish oblong, dull yellowish green, with fine red cheek in sun, scattered russet specks; stem, stout; calyx, open; core, large; flesh, white, melting, sugary, vinous, juicy, "very good," sometimes "best." October, November.

Doyenne Santellete.

Sentilet.

Foreign. An old variety, little known. Tree, vigorous; wood, stout, yellowish. Fruit, above medium, roundish pyriform, dull yellowish green, traces, streaks and dots of russet, red in sun; stem, long, slender; calyx, small, open; flesh, yellowish white, vinous, melting, juicy, "very good." October.

Doyenne Goubalt.

Chapen.

Foreign. Promises a valuable variety for orcharding, on pear roots. Fruit, medium to large, obovate, acute pyriform; surface, uneven, dull pale yellow, with a few traces of russet; stem, short, thick flesh next the fruit; calyx, small; basin, deep; core, small; flesh, melting, juicy, sweet, "very good." November to December.

Doyenne du Comice.

Doyenné du Comice *of Angers*.

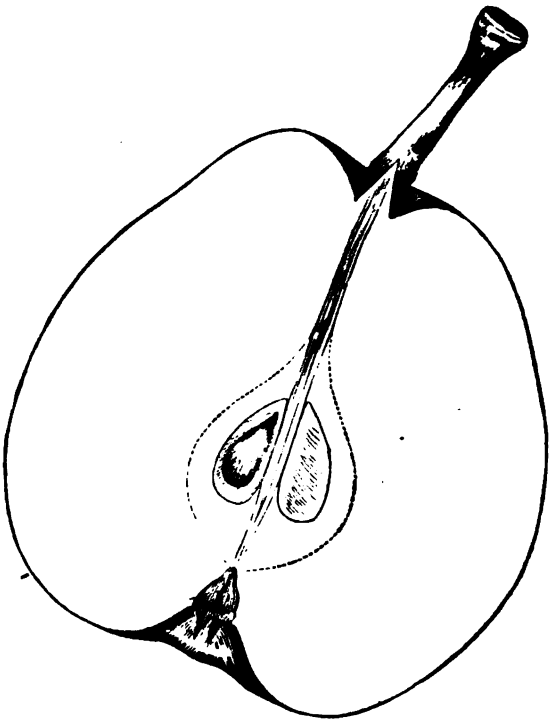
Foreign. Tree, vigorous, productive. Fruit, large, obtuse pyriform, greenish yellow, russet specks, red around stem; stem, short; calyx, open; basin, deep; core, large; flesh, yellowish white, melting, juicy, sugary, "very good." October, November.

Doyenne de Fais.

Foreign. Fruit, large, roundish; skin, smooth, yellow, often with a fine red cheek; stalk, stout, about one inch long, inserted in a deep cavity; calyx, spreading, placed in a deep, narrow basin; flesh, white, fine-grained, very buttery, melting, juicy, rich, high-flavored and delicious. Tree, robust, and a great bearer. October. For the above description, we are indebted to Messrs. Thorp, Smith & Co., of Syracuse.

Duchess of Angouleme.

Duchesse d'Angouleme.



Foreign. A valuable variety for market, on the quince, and on the quince only. High culture of this variety produces very large and "very good" fruit, otherwise it is indifferent in size or character. Our drawing is from a small specimen. Fruit, large, oblong, obovate pyriform, dull greenish yellow, traced and dotted with russet; stem, rather long, stout; calyx, medium, partly open; basin, deep, uneven; core, below medium; seeds, oblong pyriform; flesh, white, buttery, juicy, "very good." October.

The Striped Duchess d'Angoulême differs only in the fruit being striped, yellow and green.

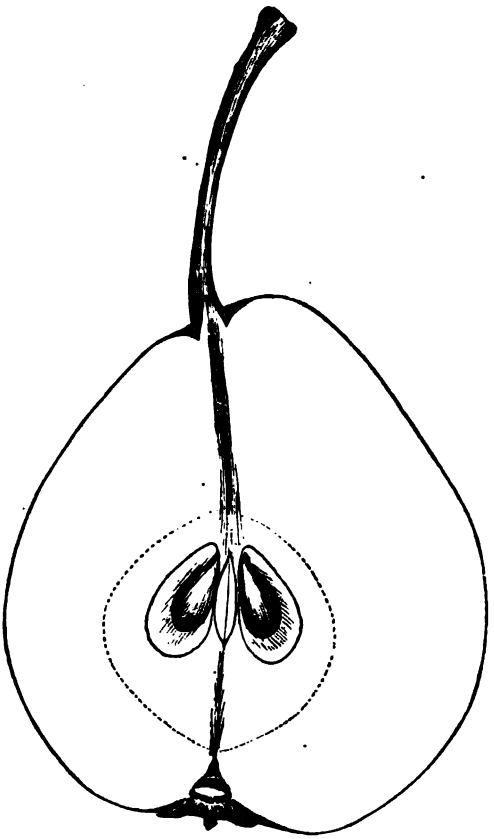
Duchesse of Orleans.

St. Nicholas. | Beurré St. Nicholas.

Foreign. Tree moderately vigorous, upright, olive-colored wood, leaves dark blue green, narrow. Thus far productive and healthy on quince;

one little tree, two years planted, this season yielded forty-three beautiful specimens. Fruit, large, oblong, ovate pyriform, greenish, becoming greenish yellow, with stripes and patches of dull thin russet, sometimes red cheek in sun; stem, variable, fleshy at base; calyx, small, open; short segments; flesh, melting, juicy, "very good." October.

Dunmore.



Foreign. A good grower and early bearer on pear roots, requires rich, high culture; shoots slender, erect, brownish slate color. Fruit, large to very large, (our drawing made from an unripe specimen,) oblong obovate, greenish, dotted and speckled with brownish red russet, patches of rough russet near calyx; when not fully ripe, dark green specks under-

neath the skin; stem, rather long; fleshy at base; calyx, open; segments, much reflexed; core, rather large; flesh, yellowish white, buttery, melting, "very good." September and October.

Duchesse of Mars.

Duchesse de Mars, | Captif de St. Helena.

Foreign. Fruit, below medium, oblong obovate, yellow, mostly covered with russet, ruddy in sun; stem, set without depression; calyx, small, closed; core and seeds small; flesh, melting, juicy, perfumed, "very good," if not "best." October and November. This succeeds well, and this fruit is best grown on quince.

Duchesse of Berri.

Duchesse de Berri, | Duchess of Berry.

Foreign. This name has sometimes been applied to the Duchess of Angoulême, which is entirely distinct. Tree, moderately vigorous, spreading, shoots reddish brown. Fruit, medium, roundish obovate, clear pale yellow, dotted with small russet specks; stem, short; calyx, small; seeds, large; flesh, yellowish white, rather coarse, melting, juicy, sugary. September and October.

Dundas.

Parmentier.

Foreign. Rather liable to drop before mature. Fruit, medium, obovate ovate, yellow, greenish black dots, deep red cheek in sun; stem, stout; calyx, small; flesh, yellowish, melting, perfumed, "very good." October and November.

Early Sugar.

Amiré Joannet, Joannette, St. John's Pear, | Archduc d'Eté, Sugar Pear, Harvest Pear,

St. Jean.

Foreign. Only valued for ripening very early. Fruit, small, pyriform, light green to yellowish, faint blush; flesh, white, sugary, "good" if eaten just in perfection, otherwise mealy. July.

Elizabeth. (Edwards'.)

American. From New-Haven, Ct. Fruit, medium, roundish, obtuse pyriform, angular, lemon yellow, russet specks and patches; stem, short; calyx, large, open; core, large; flesh, white, rather coarse, melting, juicy, vinous, "very good," often "best." October.

Elizabeth. (Manning's.)

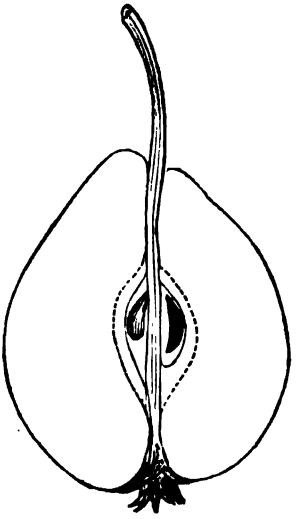
Elizabeth Van Mons, | Van Mons No. 154.

Foreign. Received under number, and named by the late Mr. Manning; young wood, reddish brown. Fruit, small, obovate rounded, lemon

yellow, red in sun, slight traces of russet; calyx, small, open; core, large; flesh, yellowish white, melting, sugary, juicy, "very good." Last August.

Early Butter of Cincinnati.

This is a variety which our Cincinnati pomologists seem unable to recognize with any known description. We have been unable to examine the fruit in perfection, but some small specimens received, from which our drawing was made, induced a guess at Dearborn Seedling. The original tree at Cincinnati is said to have been probably brought from New-Jersey. It is of upright growth, short-jointed, yellowish brown wood, forming a handsome symmetrical head. Fruit small, oblong ovate, narrowing most to the stem, light greenish yellow, with dark green specks, rarely a bronzed red in sun; calyx, prominent; segments, bold, reflexed; core, compact; seeds, few, defective; flesh, white, juicy, buttery, "very good." Last July.



Echassery.

Echasserie, | Bezi de Chasserie,
Bezi d' Echassie, | Jagdbirne.

Foreign. Poor grower. Fruit, medium, roundish oval, pale green, yellowish, dotted with gray when ripe; calyx, open; flesh, melting, buttery, sweet, "good." November and December.

Eyewood.

Foreign. Tree vigorous, branches very strong, stout, yellowish brown with large white specks. Fruit, below medium, obovate, pale greenish yellow, russet traces and specks; stem, long, slender; calyx, small, open; core, large; flesh, white, rather coarse, melting, juicy, sub-acid, "very good." October.

Figue of Naples.

Figue de Naples, | Comtesse de Frénol,
Fig Pear of Naples, | De Vigne Pelone.

Foreign. Grown by some under name of Beurré Bronzé. Tree vigorous, productive, shoots upright, brown. Fruit, medium, oblong obovate, pale greenish yellow, dull red in sun, russety; calyx, small; stem, stout, fleshy knob at base; flesh, juicy, pleasant, breaking, "good." Oct

Figue.

Figue Vert.

Foreign. This is distinct from the preceding, and by some counted superior; tree vigorous, hardy, productive on either pear or quince; fruit medium, oblong pyriform, green, much overspread with yellow and red russet; stem stout, fleshily set upon the neck; calyx open, without divisions; core rather large; flesh white, juicy, melting, slightly perfumed, "very good." November.

Fondante de Charneuse.

Foreign. New. Fruit large, obtuse pyriform, irregular, dull yellowish green, dotted and clouded with russet; stem stout; calyx open; flesh melting, juicy, saccharine, sometimes astringent, "very good" Early October. (Wilder, in Hort.)

Fondante de Malines.

Fondante de Malines (Esperin).

Foreign. New. Tree vigorous, productive; fruit medium, roundish obovate, pale yellow, traced and much covered with red russet and brownish red, occasional spot of vermillion in sun; stem long; calyx small; core large; flesh white, buttery, melting, sweet, "very good." October.

Fondante Van Mons.

Foreign. Tree good grower and productive; fruit medium, roundish obovate, greenish yellow, marbled with red and some russet specks; stem stout, curved; calyx large, open; core large; flesh yellowish white, coarse, melting, buttery, sweet, "very good." October.

Forelle.

Trout Pear, | Poire Truite,
Forellenbirne.

Foreign. Deserves more attention than it has yet received; tree vigorous, productive on quince or pear; wood violet red, young shoots downy; fruit medium, oblong obovate, dull yellow in shade, vermillion in sun, grayish dots margined with crimson; stem slender; calyx partly open; core medium; flesh white, fine-grained, buttery, melting, juicy, vinous. "very good" or "best." October, November.

Frederick of Wurtemberg.

Frederick de Wurtemburg.

Foreign. Well known and extensively grown in this country; tree very early and productive bearer, young wood strong, yellowish brown; fruit decays rapidly at core, often worthless ere the grower thinks it ripe; fruit large, angular pyriform, uneven surface, dull yellow, crimson cheek; stem stout, usually set on or thickening into the fruit; calyx open; basin shallow; flesh white, juicy, melting, "good." September.

Fredrika Bremer.

Virgalieu, *erroneously, of some.*

American. From Oneida county, New York, recently introduced by J. C. Hastings, Esq. It is said to be an early and productive bearer, which we are disposed to believe, as a graft, two years set this year, produced fine specimens. Fruit above medium, roundish obovate, obtuse pyriform, greenish, becoming pale yellow, with slight russet dots; stem one to one and a half inch long, rarely a cavity; calyx open, short, erect segments; basin rather deep, slight furrows; core medium; seeds blackish; flesh white, a little coarse, melting, juicy, nearly "best." October, November.

Gansel's Bergamot.

Broca's Bergamot,	Bonne Rouge,
Ives' Bergamot,	Gurle's Beurré,
Staunton,	Diamant.

Foreign. An old variety, with few superiors when well grown It requires a warm, rich soil; on cold clay it is almost tasteless; tree vigorous, spreading, succeeds well on quince, productive; fruit large, roundish obovate, yellowish brown russet, red in sun, russet dots and patches; stem short; cavity deep; calyx open; basin deep; core large; flesh yellowish white, coarse, melting, juicy, "very good," or "best." October.

Gansel's late Bergamot.

Foreign. A new variety recently introduced, very much resembling the preceding, except its period of maturity being extended into December. It is also said to have less color in sun, and the flesh entirely free from granulations. Tree vigorous and productive on the pear root.

Gideon Paridante.

Foreign. Fruited with us this year for first time. Fruit medium, obovate pyriform, yellowish green, with brown red cheek in sun, and marbled red russet over surface; stem one and a half inch long, angularly planted with a lip one side; calyx open, narrow segments; basin shallow; core medium; flesh white, melting, sugary, "very good," nearly "best." Last September and October.

Grand Soleil.

Foreign. Tree vigorous, erect, well-formed, productive; fruit medium, roundish, orange yellow, with a russety red blush, few russet specks; stem medium, swollen at base; calyx small, closed; core large; seeds obovate; flesh yellowish white, little coarse, buttery, melting, sugary, aromatic, "very good," nearly "best." November.

Green Mountain Boy.

American. Fruit medium or above, roundish obovate, sometimes angular pyriform; stem varying; calyx open, reflexed segments; golden yellow or russety yellow, with numerous russety brown specks; core

rather large; seeds long, flattened; flesh yellowish, melting, juicy, sweet, "very good." October.

Hacon's Incomparable.

Dowuham Seedling.

Foreign. A hardy, productive variety; spreading, rather drooping branches; deserves more attention than yet received; young shoots slender, olive color, diverging; fruit rather large, roundish, obtuse pyriform, dull yellowish green and pale brown, with many russet streaks and dots; stem rather long, straight; calyx with small divisions; basin shallow; flesh white, buttery, melting, sugary, juicy, nearly if not quite "best." October, November.

Hagerman.

American. From Flushing, L. I. Fruit small, roundish, yellow, overspread with thin golden russet, red cheek in sun; stem short, stout; calyx open, segments reflexed; basin shallow; core small; seeds broad ovate; flesh juicy, sprightly, pleasant, "very good." September.

Hanover.

From Hanover Furnace, New Jersey. In size it is usually rather small, round obovate, green, with dull green russet markings, and a brown cheek; stem one inch, shallow cavity, usually angular; calyx open, plaited, sometimes furrowed, irregular basin; seeds large, plump, acuminate; flesh greenish yellow, melting, juicy, pleasant, "good." (W. D. B.)

Hanners.

Hamus.

Origin uncertain: has generally been considered a synonym of Cushing, but proves distinct; Mr. C. M. Hovey first pointed out the error. Shoots upright, brownish yellow; fruit medium, oblong, rounded at crown, obtuse at stem, yellowish green to pale yellow, with large pale russet patches and dots; stem stout, swollen at base; calyx small, open; core large; flesh white, melting, juicy, vinous, "very good." September.

Harvard.

Boston Epargne, | Cambridge Sugar Pear.

American. Native of Cambridge, Mass. Tree hardy, vigorous, upright, productive. Fruit medium, oblong pyriform, russety olive yellow, reddish cheek; stem rather stout, not sunk; calyx small; basin narrow; seeds long, obovate; flesh white, juicy, "very good," liable to decay at core. September.

Henrietta.

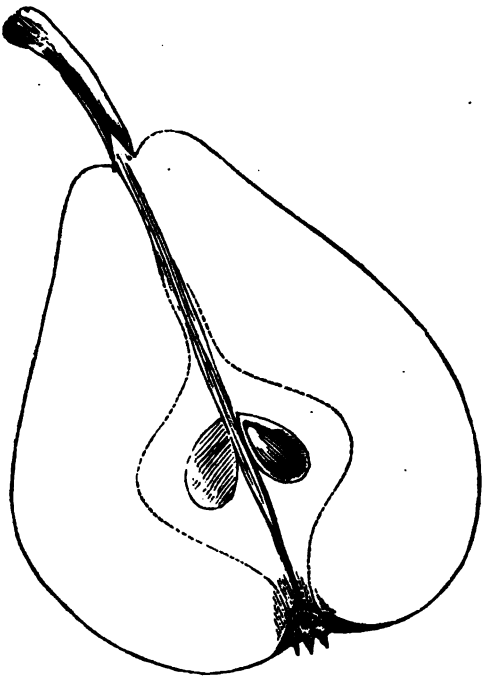
Edwards' Henrietta

American. Native of New Haven, Conn. Tree vigorous, hardy, productive. Fruit medium, obovate, obtuse pyriform, dull yellow crimson

spots in sun, russet at base of stem; calyx closed; basin furrowed; core large; flesh white, rather coarse, melting, juicy, "good." Last August.

Haddington.

Smith's Haddington.



American. From seed of Pound pear, grown by J. B. Smith, Esq., at Haddington, Pa. Tree vigorous, productive; fruit above medium, oblong, obovate pyriform, greenish yellow, brownish cheek, and russet dots and patches; stem medium, cavity shallow; calyx medium; segments short, erect; core medium; seeds long, ovate; flesh yellowish, juicy, aromatic, "very good." January to April.

Henkel.

Foreign. Tree fine grower, young shoots grayish brown; an early, very productive bearer on pear roots, valuable for orcharding. Fruit large, obovate, somewhat obtuse pyriform, dull yellow, patches of russet and green specks; stem long, curved; calyx open; segments short; basin uneven; core medium; flesh yellowish white, rather coarse, juicy vinous, "very good." Early September.

Henry the Fourth.

Henri Quatre, | Jacquin.

Foreign. Tree hardy, good bearer, young shoots diverging, yellowish brown. Fruit small, roundish pyriform, greenish yellow, with small gray dots; stem long, slender, swollen at base; calyx small; flesh whitish, rather coarse, juicy, "good. Early September.

Hericart.

Foreign. Fruit large, obtuse pyriform, light pale greenish yellow, russet dots and patches; stem long, slender; calyx small; segments reflexed; core small; seeds long; flesh rather coarse, breaking, juicy, very sweet, "very good." Early September. Some specimens we have had of this proved almost best; we think it improves with age of trees.

Hosen-Schenck.

Schenck's Pear, | Schenck's August Watermelon,
Smokehouse.

American. From Pennsylvania. New. Fruit large, obovate, yellow, melting, not high flavor. Last of August.

Howell.

American. Native of New Haven, Conn., recently introduced to notice. Fruit, large, obtuse pyriform, pale yellow, small russet dots, faint red blush in sun; stem, often curved, without depression; calyx, open; basin, irregular; flesh, melting, juicy, slightly acidulous, delicate aroma. October. (Wilder, in Hort.)

Hull.

American. Native of Somerset, Mass. Tree, vigorous, upright; wood, reddish brown. Fruit, medium, obovate, yellowish green, dull red, and russet; stem, long; calyx, half open; core, large; flesh, white, rather coarse, gritty at core, juicy, "good." October.

Inconnue Van Mons.

Foreign. Best on quince. Fruit, medium, oblong pyriform, dull, pale green, traces and dots of russet; stem, long, slender; calyx, open; basin, deep; flesh, melting, buttery, "very good." December to February. (Wilder, in Hort.)

Jaminette.

Josephine, | Sabine,
Colmar Jaminette, | D'Austrasie,
Beurré d'Austrasie.

Foreign. Tree, vigorous, not an early bearer. Fruit, above medium obovate, obtuse pyriform, green, with russety brown dots and patches; stem, stout; calyx, open; flesh, white, rather gritty at core, juicy, sweet, "good." November, December.

Jargonelle.

Epargne,
Grosse Cuisse Madame,
Beau Present,
Poire de Tables des Princes,
Saint Sampson,
Saint Lambert,
Sweet Summer,
Real Jargonelle,
Jargonelle *of the English.*

Foreign. An old variety, abundant bearer, now surpassed, for all except large collections, by more recently originated sorts. Fruit, large, long, ovate pyriform, greenish yellow, little brown in sun; stem, long; calyx, open, prominent; flesh, yellowish, coarse, juicy, "good," often "very good." August.

Jean de Witte.

Nos. 1482, 1082, and 1602 of Van Mons.

Foreign. Tree, moderate growth, short-jointed wood, upright. Fruit, medium or above, obovate, narrowing to the stem, pale yellow, little russet; flesh, melting, juicy, vinous, slightly sub-acid, "very good." November to January.

Jersey Gratioli.

Foreign. Tree, moderately vigorous, abundant bearer, succeeds on quince; wood, stout, short-jointed. Fruit, large, roundish, oblong obovate, slightly angular, greenish yellow, blush in sun, russet specks, and also at base of stem and crown; stem, stout, obliquely inserted; calyx, open, short segments; core, medium; flesh, yellowish white, little coarse, melting, juicy, vinous. September, October. (Hov. Mag.)

Johonnot.

Franklin.

American. Native of Salem, Mass. Tree moderate, healthy grower, upright, spreading; wood dark reddish brown, suited to orcharding in our western, rich soils, productive. Fruit below medium, roundish obovate, angular, greenish yellow, dull russet; stem stout, fleshy at base; calyx large, open; core large; seeds small; flesh white, rather coarse, melting, juicy, vinous, almost "best." September.

Josephine de Malines.

Foreign. Not an early bearer or a good grower, best on pear. Fruit medium, roundish obovate, yellow blush in sun, traces and specks of russet; calyx open; core large; flesh yellowish white, melting, fine, juicy, vinous, "very good." December, January.

Julienne.

Origin uncertain. Tree thrifty, upright, light yellowish brown shoots, productive, and in warm, rich, sandy soils, often very fine; in cold clay it is inferior, best on quince. Fruit below medium, roundish, oblong obovate, clear bright yellow, with a little of fine russet marblings and patches; stem rather stout; calyx small, closed; core compact; seeds blackish; flesh white, rather coarse, half buttery, sweet, "very good." August.

Kingsessing.

Leech's Kingsessing.

American. Native of Kingsessing township, near Philadelphia. Tree upright, vigorous, somewhat thorny, young shoots yellowish green or brownish olive, gray dots. This, when better known, will, we think, take position in first class. It is, however, not a very early bearer, and on quince, requires double working. Fruit large, or above medium, obovate, sometimes obtuse pyriform, sea-green, with patches of dark green; stem stout, fleshy at base; calyx small; basin shallow; flesh buttery, delicate, "best." Last August.

Knight's Monarch.

Foreign. A variety requiring very high culture; wood light olive color. Fruit large, obovate oblong, yellowish brown, tinged with red, dotted with gray; stem short; calyx open; flesh yellowish white, melting, juicy. January.

King Edward's.

Jackman's Melting.

Foreign. Tree thrifty, shoots upright, dark brown. Fruit large, pyriform, yellow, with patches of dull russet, red cheek in sun; stem short; calyx small; flesh yellowish, buttery, melting, variable, "good." October.

Las Canas.

Foreign. Tree upright, vigorous, early, good bearer. Fruit medium, or below, pyriform, pale yellow, partly covered with thin russet; seeds black; flesh juicy, sweet, nearly "best." October.

La Juive.

Foreign. Tree vigorous, branches upright. Fruit above medium, pyriform, yellow, with gray specks; stem short; flesh yellowish, buttery, juicy. October. (Hov. Mag.)

Lamoriciere.

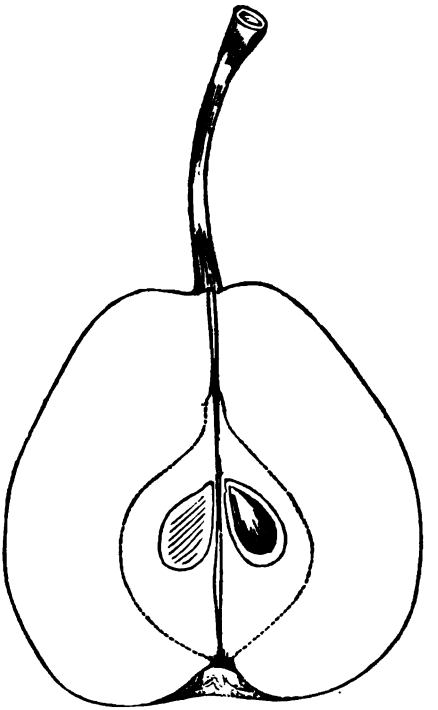
General Lamoriciere.

Foreign. Fruit medium, pyriform, gray, with green dots; stem stout; calyx large, closed; flesh greenish white, melting, buttery, juicy. Last September. (Hov. Mag.)

Laherard.

Foreign. Fruit above medium, obovate, obtuse pyriform, lemon yellow, brownish red cheek in sun; calyx closed; stem stout; flesh white, melting, juicy, pleasant, sub-acid, "very good." October. Succeeds on quince. (Wilder, in Hort.)

LEWIS.



Native of Roxbury, Mass. It is a hardy tree, vigorous, spreading, rather drooping as it grows old, always bears, and fruit always regular and even in size. If well ripened, it is a fine, delicious fruit, otherwise not more than second quality. It is profitable as a standard orchard variety, but requires rich deep soil, or its immense crops exhaust too rapidly, causing the fruit to be quite small and insipid. Fruit, below medium, roundish obovate, obtuse at stem; color, dark, becoming pale green with many russet specks; stem, long, slender, shallow depression; calyx, large; segments, broad in divisions; basin, almost obscure; core, above medium for size of fruit; seeds, large, ovate; flesh, yellowish white, rather coarse, melting, juicy. Season, November to February.

LEE'S SEEDLING.

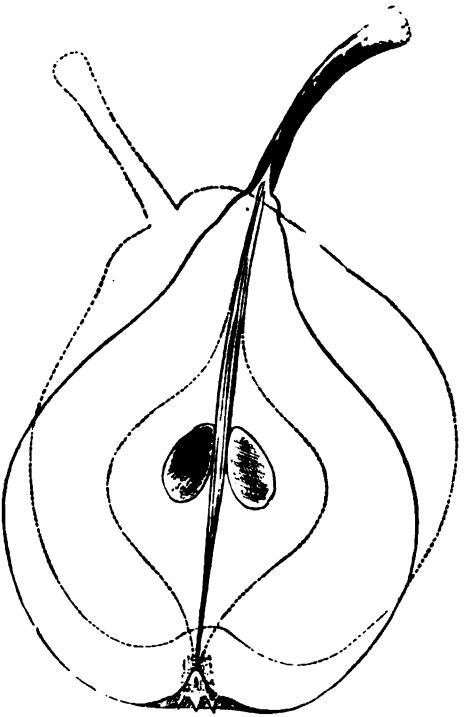
American. Native of Salem, Mass. Fruit, medium, roundish oval greenish russet, brown in sun; stem, short; calyx, open; core, large flesh, white, coarse, juicy, "good." September.

Locke.

Locke's New Beurre.

American. From West Cambridge, Mass. Fruit, medium, roundish obovate, yellowish green, spotted with shades of darker green and russet; stem, medium; calyx, small, half closed; flesh, greenish white, juicy, vinous, "good." November and December.

Lodge.



American. From vicinity of Philadelphia. Requires rich, warm sandy soil, when it is one of the best; on cold clay it is hardly "very good." Fruit, medium, or above, sometimes large, varying in form, (see our engraving;) when fully mature, yellowish, with rich golden russet, and patches of dull russet; calyx, with short, half reflexed segments; core, medium; seeds, blackish; flesh, whitish, a little gritty at core, juicy, melting, "very good." September and October.

Limon.

Foreign. This promises to take a first-class rank. Tree, moderately vigorous, shoots long, slender, reddish brown. Fruit, above medium, obovate roundish, yellow, with faint red cheek; stem, rather short; basin, shallow; flesh, white, melting, juicy, nearly "best." August.

Marie Louise.

Forme de Marie Louise, Marie Chretienne, | Princess de Parme, Braddick's Field Marshal, Maria.

Foreign. Tree, vigorous, rather straggling, or diverging and drooping, with olive gray colored shoots; requires rich, warm, sandy soil, otherwise it is only a "good" pear. It is hardy and productive. Fruit, large, oblong pyriform, dull green, becoming pale yellow, with marblings, dots, and patches of russet, and russet at crown and base of stem; stem, medium, obliquely set in a slight cavity, or with a raised lip on one side; calyx, open, irregularly formed; segments, connected; core, small; seeds, broad, ovate; flesh, white, buttery, melting, juicy, vinous, "very good." Last of September and October.

March Bergamotte.

Foreign. Fruit, medium, obovate, greenish yellow; flesh, buttery, gritty at core, "good." March.

Martin Sec.

Rousselet d'Hiver.

Foreign. Fruit, medium, or below, obovate, angular, yellow, with small specks, dull brownish red one side; stem, long, slender; calyx, in an abrupt furrowed basin; flesh, yellowish, half melting, juicy, "good." December.

Merriam.

American. From Roxbury, Mass. Tree, thrifty, productive, supposed a seedling from Gray Doyenné. Fruit, large, roundish, dull yellow, much covered with smooth pale russet; stem, short; calyx, small, closed; flesh, yellowish white, coarse, juicy, sugary; core, large; seeds, dark brown. Last of September. (Hov. Mag.)

Marechal de la Cour.

Foreign. Tree, vigorous, branches long, thorny at ends, early bearer. Fruit, large, oblong pyriform, or ovate, yellowish green, vermillion in sun; stem, crooked, inserted with a lip one side; calyx, large, open; flesh, white, fine, melting, juicy, vinous. October. (Hov. Mag.)

McLaughlin.

Origin unknown; probably an American seedling. Tree, moderate, healthy grower, productive. Fruit, above medium, oblong, obtuse pyri-

form, pale yellow, with brownish red in sun; stem, short, swollen at junction with tree; calyx, open; core, medium; flesh, yellowish white, a little coarse, juicy, "very good." November and December.

Millot de Nancy.

Foreign. Fruit, medium, obtuse pyriform, pale yellow, with patches and traces of russet; flesh, melting, juicy, sugary, "good." January. (Wilder, in Hort.)

Moccas.

Foreign. Tree, very vigorous, rapid growth, and productive. Fruit, medium, obovate roundish, greenish yellow, brown cheek in sun, and a few russet dots; stem, long, curved; calyx, partly open; flesh, yellowish, melting, juicy, "very good." December.

Muscadine.

American. From near Newburgh, N. Y. We have had trees six years, but they have not fruited. We condense from Mr. Downing's description: Fruit, medium, roundish obovate, pale yellowish green, with brown dots; stem, an inch long; calyx, with reflexed segments; basin, shallow; flesh, white, buttery, melting, musky. Last August, first September. Shoots, stout, dark gray brown.

Napoleon.

Médaille, | Roi de Rome.

Foreign. Tree, vigorous, upright grower, olive-colored shoots, fruit largest and finest on quince, very productive. Fruit, large, obtuse to obovate, and rounded pyriform, greenish yellow, smooth; stem, varying, usually stout; calyx, medium, open; flesh, white, tender, juicy, "good." October. Valuable as a market sort on quince. Rivers says the Napoleon d'Hiver is not sufficiently distinct to be retained.

Orange Bergamotte.

Orange Pear.

Foreign. An old variety, great bearer, valuable only for cooking. Fruit, above medium, pyriform, yellow, russet in sun; flesh, yellowish, sprightly, astringent. September and October.

Oakley Park.

Oakley Park Bergamot.

Foreign. Fruit, medium, roundish obovate, greenish yellow, with russet; calyx, partly open; stem, slender; flesh, buttery, melting, "good." October.

Oudinot.

Beurré Oudinot.

Foreign. Fruit large, pyriform, yellowish green, with brownish cheek; stem curved; calyx medium; basin shallow; flesh fine, juicy, "very good." September.

Osborn.

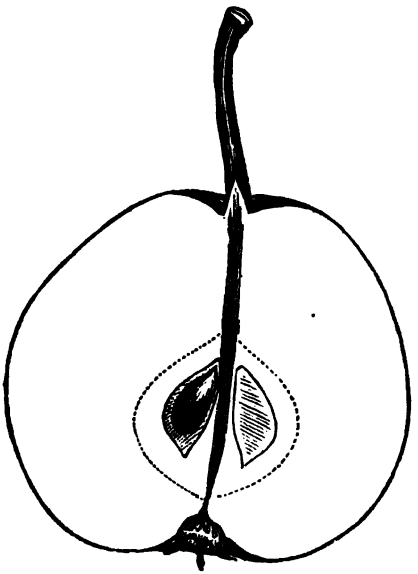
American. From Economy, Ia., introduced first to notice by A. H. Ernst, Esq., of Cincinnati. Fruit small, ovate pyriform, greenish yellow; stem about one inch long, set with two or more fleshy ridges at base; flesh white, tender, juicy, sweet, a little astringent, "good." Early August.

Osband's Summer.

Osband's Favorite, | Summer Virgalieu *of some.*

American. Native of Wayne Co., N. Y. Fruit below medium, ovate, obovate pyriform, clear yellow, small green dots, and rarely a slight red cheek in sun; skin rather thick; stem medium, inserted in a shallow, uneven cavity; calyx with open, long straggling segments; flesh yellowish white, rather coarse-grained, juicy, "good." Early September.

Ott.



American. Native of Montgomery Co., Pa. This is by many Eastern pomologists classed as "best:" specimens we have had from Prof. Kirtland have not merited more than to be classed "very good." Fruit small, roundish, greenish yellow, with little russet, and rarely faint red cheek in sun; stem medium, a little curved; calyx rather large, open, reflexed; core below medium; seeds blackish; flesh yellowish, melting, juicy, slightly aromatic. August.

Oswego.

Oswego Beurré, | Reed's Seedling.

American. Native of Oswego, N. Y. Tree vigorous, hardy, succeeds well thus far, and an early bearer on quince or pear roots; fruit medium, ovate obovate or obovate rounded, dull yellowish green, with marblings and patches of russet; stem short, stout, cavity rather deep; calyx medium, closed; core small; flesh melting, juicy, sub-acid, sprightly, "very good." October.

Paul Thielen.

Foreign. Fruit medium, roundish obovate, yellow, with dull red cheek; stem long, obliquely set; calyx open, segments short, upright; flesh rather coarse, juicy, "good." October.

Passe Colmar.

Passé Colmar Epineaux,
Colmar Gris,
Passé Colmar Gris,
Beurré Colmar Gris, dit Précel,
Précel,
Fondante de Panisel,
Fondante de Mons,
Beurré d'Argenson,
Regintin,
Chapman's,
Colmar Hardenpont,
Présent de Malines,
Marotte Sucrée Jaune,
Souverain,
Colmar Souverain,
Gambier,
Cellite,
Colmar Preule,
Colmar Dorée,
Colmar Van Mons,
Colmar d'Hiver.

Foreign. Tree vigorous, with long, straggling, half-drooping shoots of a lively brownish yellow; with high culture, severe thinning, and great care, it is a first-class sort; with common ordinary care, it is worthless. Fruit medium to large, oblong obovate, obtuse pyriform, yellowish green, dull yellow when fully mature, with some russet; stem a little more than medium length, set with slight depression; calyx partly open, basin shallow; flesh yellowish white, buttery, sweet, aromatic. November, January.

Petre.

American. Originated in the old Bartram Botanic Garden, near Philadelphia, Pa. Tree moderate grower, with slender yellowish brown shoots, abundant bearer; fruit medium to large, oblong, obovate pyriform, pale yellow, with russet patches; stem rather stout, largest at base, cavity abrupt; calyx medium; basin narrow; flesh whitish, fine, melting, buttery, perfumed, juicy, nearly "best." October. The "Bézi de la Motte" has been disseminated for this variety, somewhat, through the West.

Pengethley.

Foreign. Tree vigorous; fruit medium, obovate, yellowish brown, russeted; stem medium; calyx small, partly open; flesh yellowish, juicy, "good." February, March.

Pennsylvania.

American. From Pennsylvania. Tree vigorous, hardy, and moderately productive; fruit large, obovate pyriform, surface irregular, yellowish

green, brownish russet, marbled; stem stout, calyx small, half closed; core small; flesh yellowish, rather coarse, breaking, juicy, "good." October.

Pendleton.

Pendleton's Early York Pear.

American. From Connecticut. Young wood, dark olive; fruit rather large, obovate, obtuse pyriform, pale greenish yellow, russet specks; stem curved; calyx open; flesh white, tender, sweet, "good." Last July. (Hov. Mag.)

Plombgastel.

Dusnas, Plumbgartel, | Plougastel, Jergils?

Foreign. Tree vigorous, upright, succeeds on quince; fruit above medium to large, ovate pyriform, greenish yellow, red in sun, dull russet specks; stem stout; calyx large, open, segments reflexed; core large; flesh white, half melting, juicy, "good," or perhaps "very good." September, October.

Poire d'Albret.

Foreign. Tree vigorous, dark wood, good bearer; fruit medium, pyramidal, angular, dark russet, bronzed in sun; stem stout, curved, swollen at base; calyx partly open; core small; flesh greenish white, coarse, melting, juicy. October. (Hov. Mag.)

Pratt.

American. Native of Rhode Island. Tree vigorous, upright growth, productive on pear; fruit above medium, obovate pyriform, greenish yellow, with gray and russet dots and specks; stem slender; calyx open; flesh white, fine-grained, melting, juicy, sugary, "best." September.

Poire d'Abondance.

D'Abondance.

Foreign. Fruit above medium, oblong pyriform, pale yellow, with russet dots, red in sun; flesh melting, juicy, "very good." October.

Pulsifer.

American. Native of Illinois. Tree upright, vigorous; shoots dark olive, early and productive bearer. Fruit below medium, pyriform obtuse, dull yellow, with traces of russet; stem short; calyx small, open; flesh white, melting, juicy, sweet, "very good." Early August.

Princess Royal.

Groom's Princess Royal.

Foreign. Tree hardy, vigorous, not an early bearer. Fruit medium, obovate, dull pale green, dotted with russet; stem set in shallow cavity;

calyx open; segments short; core large; flesh yellowish, rather coarse, melting, juicy, "good." January, February.

Queen of the Low Countries.

Reine des Pays Bas.

Foreign. We have often examined this sort, but have been unable as yet to fruit it in six years that we have had the variety. We condense our description from Downing: Fruit large, obovate, acute pyriform, dull yellow, dotted and russeted, dark red in sun; stem one and a half inch long, curved; calyx small; basin deep; flesh white, buttery, melting, juicy, vinous, sub-acid. Early October.

Rallay.

We received specimens (from which we take our description) of this pear from Messrs. Ellwanger & Barry. It is we believe, an old variety, but we had never before seen it. Fruit small to medium, globular, acute pyriform, skin rough, dull yellow, dull reddish cheek, over the whole spots of russet; stem slender, obliquely set without depression; calyx with crumpled segments; core large; flesh yellowish white, breaking, juicy, gritty at core, "good." November, December.

Rapalje.

Rapalje Seedling.

American. Described by Dr. A. H. Stevens of New York, in the Horticulturist, from which we extract, having never seen the fruit. Fruit medium, brownish yellow or russet, oblong pyriform; stem long; calyx in a slight hollow; flesh buttery, like White Doyenné. Early September.

Ropes.

American. Its name from that of the gentleman in whose garden it originated, at Salem, Mass. Fruit small, oblong obovate, brownish russet, tinged with red in sun; stem short, rather stout; calyx small, open; core small; flesh yellowish, rather coarse, melting, "good." October."

Ross.

Foreign. Tree vigorous. Fruit medium, obovate, yellowish green and russet; stem short; calyx open; flesh yellowish, rather gritty, sweet, juicy, "good." January.

Rondelet.

Foreign. Tree upright, thrifty, good bearer, suited to orcharding. Fruit small, obovate, yellow, dotted with russet, red in sun; stem slender; calyx erect, long segments; core medium; flesh yellowish white, buttery, juicy, sugary, aromatic, nearly "best." October.

Rousselet Double Esperin.

Foreign. Fruit above medium, obovate acute pyriform, dull greenish yellow, covered with cinnamon russet; stem long, stout, fleshy at base; calyx open; basin deep, furrowed; flesh white, melting, sprightly, "very good." October. (Wilder, in Hort.)

Rosabirne.

Foreign. Fruit medium, obovate, acute pyriform, angular, surface uneven, russet on dull greenish yellow; stem fleshy at base; flesh white, melting, juicy, brisk, sub-acid, "very good," may be "best." October. (Wilder, in Hort.)

Sheldon.

Penfield.

American. Native of Western Central New York. Tree vigorous, erect, hardy, good bearer on pear, young shoots short-jointed, light yellowish. Fruit medium or above, roundish, a little angular, sometimes obovate, pale greenish russet, light red or bronzed in sun, little specked with dark russet; stem short, rather stout, slightly curved; calyx medium, open, broad short segments; core rather large; seeds dark brown; flesh a little coarse, and gritty at core, otherwise melting, juicy, sugary, sprightly, aromatic, nearly "best." October.

Skinless.

Sanspeau, | Poire Sans Peau,
Fleur de Guignes.

Foreign. An old variety, that on rich, deep, strong, clayey soils is productive and "very good." Fruit small, oblong pyriform, pale greenish yellow, light red specks in sun; stem long, slender; calyx closed; flesh white, juicy. Early August.

Signoret.

Sagaret.

Foreign. Fruit medium or below, roundish obovate, greenish yellow, russet specks; calyx open; flesh coarse, breaking, hardly "good." November.

Serrurier.

Serrurier d'Automne.

Foreign. Fruit medium, oblong obovate, yellow, with russet specks and blotches; stem in a deep cavity; basin shallow; flesh melting, juicy, "good." October.

St. Mesmin.

Foreign. Fruit large, oblong ovate, yellowish green; stem without depression; calyx half open; flesh juicy, "good," perhaps may be "very good." October.

Shurtleff.

Shurtleff's Seedling.

American. Native of Boston. Tree vigorous, good bearer. Fruit medium, roundish obovate, greenish yellow, russeted at stem, dotted with russet specks, dark red cheek in sun; stem rather long, swollen at base; calyx large, open; core large; flesh white, coarse, melting, juicy, gritty at core. September. (Hov. Mag.)

Souveraine D'Ete.

Foreign. Fruit medium, roundish obovate, lemon yellow, traced and dotted with russet, bright red cheek in sun; calyx open; stem short flesh melting, tender, juicy, "very good." August.

Sterling.

American. Native of Western New-York. Tree thrifty, upright growth, early bearer. Fruit large, roundish obovate, pale yellow, shaded with red in sun, russet at base of stem; stem long; calyx open; core large; flesh white, coarse, half melting, juicy, "very good." Early September.

St. Michael Archange.

Foreign. Fruit medium, oblong, ovate pyriform, yellowish gray and green spotted; flesh greenish white, melting, buttery, "very good." Last September. (Hov. Mag.)

St. Jean Baptiste.

Foreign. Tree moderate grower, stout, short-jointed shoots. Fruit large, oblong, obovate pyriform, pale greenish yellow, with dark specks; stem short, curved, swollen at base; flesh white, melting, buttery, vinous. October. (Hov. Mag.)

Styer.

Origin unknown. Fruit medium, roundish, green, becoming yellow, with russet dots and tracings; stem varying; cavity shallow; calyx imperfect, basin narrow, abrupt, deep; core medium; flesh yellowish white, a little gritty at core, buttery, juicy, perfumed, "best." September.

Summer Franc Real.

Franc Réal d'Eté, | Gros Micet d'Eté,
Fondante.

Foreign. Tree thrifty, hardy, good bearer, rarely more than "good" on pear roots, sometimes nearly "best" on quince. Fruit medium, obovate, obtuse pyriform, dull green, becoming yellowish green, with brownish green dots; stem short, thick; calyx medium, long segments, furrowed basin, large core; flesh white, not fine-grained. buttery, juicy, sweet. September.

Suzette de Bavay.

Suzette de Bavay (Esperen).

Foreign. Tree vigorous, shoots light greenish brown. Fruit medium, obovate pyriform, dull yellow and russet; flesh melting, juicy, "very good." February and March.

Summer Portugal.

Passans du Portugal.

Foreign. Tree upright growth, shoots reddish brown. Fruit below medium, roundish obovate, pale yellow, brownish red in sun; stem one inch; calyx erect; flesh white, juicy, breaking, "very good." Last of August.

Tea.

American. Native of New-Haven Co., Ct. Fruit below medium, roundish oval, clear rich yellow, blush in sun; calyx with short open segments, even with surface; core small; flesh whitish, melting, juicy, "very good," nearly "best." Last September.

Theodore.

Theodore Van Mons.

Foreign. Fruit medium, obovate pyriform, yellow, with russet spots; stem long, little or no depression; calyx large, open; broad segments; flesh whitish, melting, "very good" on quince. November.

Triomphe de Jodoigne.

Foreign. Tree very strong, vigorous grower, not an early bearer. Fruit large to very large, obovate, obtuse pyriform, greenish, with traces and faint spots of russet; flesh melting, juicy, sub-acid, "good." November.

Upper Crust.

American. Native of South Carolina. Tree healthy, moderate grower, branches slender, forming a pyriform head. Fruit size and shape of Dearborn Seedling, green, with distinct irregular russet blotches; flesh buttery, melting, "very good," if not "best." July. (Wm. Sumner, in Hort.)

Vicompte de Spoelberch.

Despoilberg, | Beni de Spoelberch,
Vicompte de Spoelberg.

Foreign. Tree moderately vigorous, branches upright, yellowish brown, with whitish gray specks. Fruit large, obovate, obtuse pyriform, pale yellow, when mature, little red in sun, and russet patches and specks; stem long, stout, fleshy at base; calyx medium; segments short, erect; core medium; flesh white, fine-grained, buttery, melting, juicy, sugary, "best." December. New, comparatively; deserves trial.

Vesouzierre.

Foreign. Tree vigorous, succeeds on quince. Fruit medium, roundish obovate, lemon yellow, dotted with red in sun; stem long; cavity open; calyx medium, open; basin shallow; core large; flesh yellowish white, rather coarse, juicy, sweet, "good." November

Walker.

Fruit large, oblong pyriform, lemon yellow, marbled with light sea-green; stem curved, fleshy at base; calyx open; long segments; basin shallow; flesh coarse, crisp, juicy, "good." September.

Westcott.

American. Native of Cranston, R. I. Fruit medium, roundish obovate, pale green to light orange yellow, dots and blotches of russet; stem slender, fleshy at base; calyx large, open; basin plaited; flesh white, juicy, melting, sugary, "good." September.

Wilbur.

American. Native of Somerset, Mass. Tree a moderate grower, with reddish brown shoots, productive and hardy. Fruit medium, oval obovate, dull yellowish green, much russet; stem medium; calyx open; core large; flesh whitish, rather coarse, a little variable, juicy, "good." September.

Winship.

Winship's Seedling.

American. Native of Brighton, Mass. Tree vigorous, wood yellowish, early and productive bearer. Fruit medium, ovate pyriform, pale yellow, traces of russet, blush in sun; stem long, slender, curved; calyx closed; core large; flesh white, melting, juicy, sugary, "good." August.

Williams Early.

American. Native of Roxbury, Mass. Tree moderate grower, reddish brown wood. Fruit below medium, ovate obovate, light yellow, red cheek, little russet at base of stem, and a few greenish specks; stem medium, a little fleshy at base; calyx large, open; core large; flesh yellowish white, coarse, juicy, sweet, "very good." September.

Williamson.

American. From the south side of Long Island. Fruit medium, obovate rounded, obtuse at stem, yellow, with russet dots and specks, and russet at stem and crown; stem short, stout, narrow, irregular cavity; calyx none; basin deep, narrow, russeted; seeds small, flattened; flesh

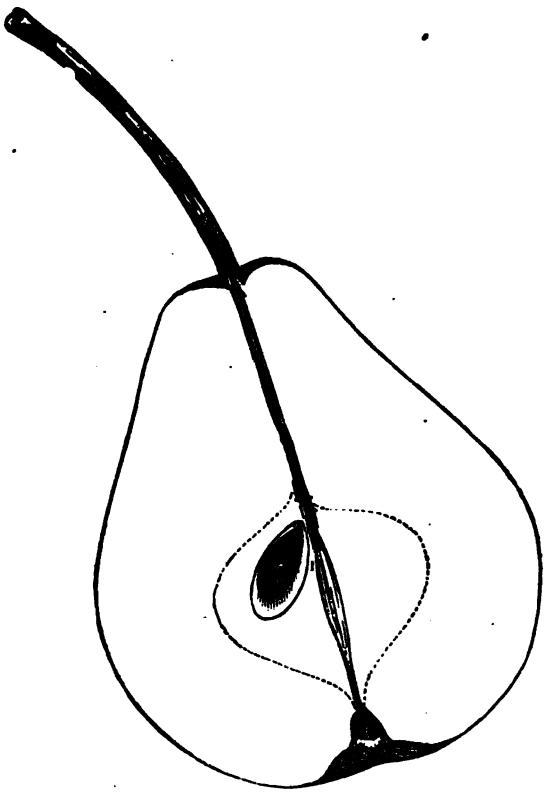
yellowish white, fine-grained, juicy, sugary, vinous, "very good," if not "best." October.

Wilhelmine.

Wilhelmina.

Foreign. Fruit medium, roundish obovate, greenish yellow, gray specks, faint red in sun; stem rather long; calyx large, open; flesh yellowish white, buttery, sugary, juicy, "good." February.

Wharton's Early.



Origin unknown. This variety we found growing in the grounds of Prof. Kirtland, who received grafts from the south centre of Ohio, under this name. We at first thought it Catinka, but it ripens too soon. Tree a vigorous, strong grower, wood yellowish brown, large foliage. Fruit above me-

dium, oblong, obovate pyriform, yellowish green, with minute russet dots, suffused at base with sea-green, occasionally a russet trace; stem long, slender; cavity slight; calyx open; segments short, rounded; core medium; seeds ovate; flesh white, melting, juicy, sweet, nearly "best." Middle to last August.

Wiedow.

Wredow.

Foreign. Fruit medium, oblong obovate, acute pyriform, greenish yellow; stem medium, obliquely planted with lip one side; calyx small; flesh white, juicy, vinous, perfumed, "very good." October.

Wilkinson.

American. From Cumberland, R. I. Tree thrifty, hardy, productive, "good" in its own locality, elsewhere poor. Fruit medium, oval obovate, yellow, with brown dots and specks; stem rather long and stout; calyx small, open; flesh white, juicy, sweet. October to December.

Zepherine Gregoire.

Foreign. Fruit globular, acute pyriform; stem fleshy; color dull green, thin covering of russet, brownish red cheek; flesh very melting, tender, juicy, "very good." November. (Wilder, in Hort.)

CLASS III. *Unworthy farther cultivation.*

Admiral.

Amiral, | Colmar Charnay.

Foreign. Large, roundish pyriform, greenish yellow; flesh coarse, juicy October.

Adams.

American. Small, roundish obovate, yellow russet; flesh coarse. October

Angleterre.

English Beurré, | Beurré d'Angleterre.

Foreign. Medium, pyriform, green and russet; flesh white. September.

Ambrosia.

Early Beurré.

Foreign. Medium, roundish obovate, greenish yellow, russeted. August.

Angleterre Noisette.

Foreign. Large, roundish, dark green. September.

Ambrette.

Tilton,
Ambre Gris,
Ambrette d'Hiver,
Belle Gabriel,
Trompe Valet.

Foreign. Small, roundish, long stem, green, russeted. November, January. This is classed by some as identical with Echassery: we think them different.

Amande Double.

Amanda's Double.

Foreign. Medium, pyriform, yellow and red. September.

Aston Town.

Foreign. Small, roundish, greenish yellow. October.

Autumn Colmar.

Foreign. Medium, oblong pyriform, pale green. October.

Autumn Bergamot.

English Bergamot,
English Autumn Bergamot.
York Bergamot,

Foreign. Small, roundish, green, gray specks. September. The French Autumn Bergamotte is pyriform, light yellowish green, equally valueless.

Belmont.

Foreign. Medium, roundish obovate, yellowish green. October.

Belle et Bonne.

Gracieuse.

Foreign. Large, roundish, greenish yellow. September.

Bergamot, Easter.

Bergamot de Paques,
Bergamot d'Hiver,
Bergamot de Bugi,
Bergamot de Toulouse,
Winter Bergamot,
Paddington,
Royal Tairling,
Terling,
Robert's Keeping.

Foreign. Medium or above, roundish obovate, greenish yellow. February, May.

Bergamot d'Hollande.

Holland Bergamot,
Beurré d'Alencon,
Bergamot d'Alencon,
Bergamotte de Fougere,
Amoselle,
Lord Cheeney's.

Foreign. Large, roundish, yellowish green, with brown russet. For ever.

Bergamot Parthenay.

Foreign. Small, roundish, greenish yellow. December, January.

Bergamot Boussiere.

Foreign. Small, turbinate, yellowish green. December, January.

Beurre Bronzee.

Foreign. Large, roundish, greenish, dull russet. November, December.

Beurre Duval.

Foreign. Medium, obtuse pyriform, yellowish green. October, November.

Beurre Seutin.

Foreign. Above medium, pyriform, yellow, red cheek. December.

Beurre Knox.

Foreign. Large, oblong obovate, pale green, little russet. September.

Beurre Colmar.

Beurré Colmar d'Automne.

Foreign. Medium, oval obovate, pale greenish yellow. October.

Beurre Van Mons.

Foreign. Medium, pyriform, yellowish, with russet. October.

Beurre Romain.

Gros Romain.

Foreign. Medium, obovate, yellowish green. October.

Beurre de Bollwiller.

Foreign. Medium, turbinate, yellowish red in sun. Winter.

Beurre Kenrick.

No. 1599 of Van Mons.

Foreign. Medium, pyriform, greenish yellow. September.

Beurre Haggerston.

No. 8 of Van Mons.

Foreign. Medium, oblong obtuse, yellow. Middle August.

Bezi Vaet.

Foreign. Medium, obovate, greenish yellow, brown cheek. November.

Bezi d'Heri.

Bezi Royal.

Foreign. Medium, roundish, greenish yellow. October

Bezi Blanc.

Foreign. Large, oblong pyriform, yellowish. August.

Bon Chretien, Spanish.

Bon Chrétien d'Espagne, | Spina.

Foreign. Large, pyriform, yellow, red cheek. December.

Bon Chretien, Flemish.

Bon Chretien Turc.

Foreign. Medium, obovate, pale green, brown cheek. November, March.

Bishop's Thumb.

Beurré Adam.

Foreign. Large, oblong, irregular pyriform, yellowish green and russet. October.

Burgomaster.

Burgermeister.

Foreign. Medium, long pyriform, yellowish green. December.

Boucquia.

Beurré Boucquia.

Foreign. Large, angular, oval pyriform, pale yellow, red cheek. October.

Burlinghame.

Burlingame.

American. Medium, roundish obovate, greenish yellow. September.

Burnett.

American Large, obtuse pyriform, pale yellow, russet. October.

Bleecker's Meadow.

Large Seckel, | Feaster.

American. Medium, roundish, yellowish. October, November.

Broome Park.

Foreign. Medium, roundish, brown. December.

Cabot.

American. Medium, oval, roundish, russet yellow, red in sun. September.

Calebasse.

Calebasse Double Extra, | Calebasse d'Hollande.

Foreign. Medium, oblong, dull yellow, russet. September.

Calebasse Grosse.

Monstrous Calabash.

Foreign. Large, pyriform, yellowish, dull green. October.

Calebasse Delvinge.

Foreign. Above medium, obovate pyriform, pale yellow. October, November.

Capucin.

Foreign. Large, oval obtuse, greenish yellow. October.

Catillac.

Cadillac, | Grand Monarque,
Groote Mogul,

Foreign. Large, turbinate, yellow and brown. November to March.

Chapman.

American. Above medium, ovate pyriform, yellow. October.

Charles of Austria.

Charles d'Autriche.

Foreign. Large, roundish, greenish yellow, russeted. October.

Citron of Bohemia.

Great Citron of Bohemia.

Foreign. Large, oblong, yellow, red cheek. October.

Clinton.

No. 1238, Van Mons.

Foreign. Large, obovate, light yellow. November

Clara.

Claire.

Foreign. Medium, oval pyriform, yellow, with red. October.

Chelmsford.

Stone.

American. Large, pyriform, yellow, red cheek. September.

Comprette.

Foreign. Medium obtuse pyriform, yellowish green. October, November

Copea.

American. Large, obovate, acute pyriform, yellow. September, October.

Commodore.

Van Mons, No. 1218.

Foreign. Medium, obovate, yellow, with red. October, November.

Comstock.

Comstock Wilding.

American. Medium, obovate, yellow, crimson cheek. November, January.

Colmar.

Colmar Doré, Incomparable, | D'Auch, De Mause.

Foreign. Large, obtuse pyriform, yellowish. December.

Colmar d'Aremberg.

Foreign. Large, obovate pyriform, yellow, with russet. October, November.

Crasanne.

Bergamot Crasanne, Beurré Plat. | Crésane,

Foreign. Large, roundish, greenish yellow, thin russet. October.

Crawford.

Foreign. Medium, obovate, yellow, tinged with brown. August.

Croft Castle.

Foreign. Medium, oval obovate, greenish yellow. October.

Cuvelier.

Foreign. Medium, obovate pyriform, yellow. October, November.

Cumberland.

American. Large, obovate, orange yellow, red cheek. September, October.

D'Amour.

Ah! Mon Dieu, | Mon Dieu.

Foreign. Small, obovate, pale yellow and red. October, November.

Dearborn.

Foreign. Large, pyriform, russeted. November, December.

De deux fois Lane.

Foreign. Medium, roundish obovate, dull yellow Last August.

Doyenne d'Hiver.

Coffin's Virgalieu.

Foreign. Medium, roundish obovate, yellow, faint blush. November.

Downton.

Foreign. Medium, pyriform, yellowish brown. December, January.

Dorr.

American. Large, obtuse pyriform, pale yellow, red cheek. August.

Dumortier.

Foreign. Small, obovate, yellow russet. October.

Duquesne d'Ete.

Foreign. Medium, obtuse pyriform, greenish. September.

Early Bergamot.

Foreign. Medium, roundish, flattened, yellowish green. August.

Excellentissima.

Foreign. Medium, roundish pyriform, yellow and dull red. Winter.

Early Denzelonia.

American. Fruit small, roundish, yellow russet. August.

Early Catherine.

Roussellet Hatif, Early Roussellet, Cyprus Pear, | Poire de Chypre, Perdrue, Kattern,
Green Catherine.

Foreign. Small, pyriform, yellow, red cheek. July.

Emerald.

Foreign. Medium, obovate, green and brown. Decembea

Enfant Prodige.

Foreign. Medium, obovate, acute pyriform, dull yellow. October.

Fine Gold of Summer.

Fin Or d'Eté.

Foreign. Medium, roundish, yellow, red cheek. August.

Famenga.

Foreign. Medium, obovate, greenish yellow. September.

Fortunee.

Episcopal,
La Fortunée de Parmentier,
La Fortunée de Paris,
Beurré Fortunée.

Foreign. Small, roundish, grayish yellow. December, February.

Foster's St. Michael.

Foreign. Medium, roundish obovate, dull yellow. September, October

Fondante du Bois.

Foreign. Medium, obovate, greenish yellow. December, February.

Forme de Delices.

Foreign. Medium, obovate, yellowish, with russet. October.

French Jargonelle.

Bellissime d'Eté,
Supreme,
Bellissime Supreme,
Bellissime Jargonelle,
Vermillion d'Eté,
Red Muscadel,
Sabine d Eté,
Summer Beauty,
English Red Cheek,
Red Cheek.

Foreign. Medium, roundish obovate, yellow, with red cheek. July, August.

Franc Real D'Hiver.

Franc Réal,
Fin Or d'Hiver.

Foreign. Medium, roundish, yellow, brownish cheek. December, February.

Gendesheim.

Foreign. Large, obtuse pyriform, greenish yellow. October, November.

Gilogil.

Gile-o-gile,
Poire à Gobert,
Garde d'Ecosse,
Jilogil.

Foreign. Large, roundish, reddish russet. November, February.

Green Pear of Yair.

Green Yair.

Foreign. Medium, obovate, green. September.

Green Chisel.

Sugar.

Foreign. Small, roundish, green, with brown cheek. August.

Grise Bonne.

Small, pyriform, green. Middle August.

Green Sugar.

Prince's Green Sugar.

American. Medium, roundish obovate, yellowish green. August, September.

Hampden's Bergamot.

Bergamot d'Angleterre, Fingal's, | Ellanrioch, Summer Bergamot,
Bergamot d'Eté.

Foreign. Large, roundish obovate, yellow. September. There is also a Summer Bergamot, small, round, yellowish green; and a *large* Summer Bergamot, all equally worthless.

Harrison's Fall.

Rushmore Bon Chretien.

Large, obtuse pyriform, greenish yellow. October.

Hessel.

Hazel.

Foreign. Small, obovate, yellowish green. September.

Huguenot.

American. Medium, roundish, pale yellow, spots of red. October.

Jalousie.

Foreign. Large, obovate pyriform, russet, reddish in sun. September.

Leon Le Clerc.

Leon Le Clerc de Laval.

Foreign. Large, obovate, yellow, few russet spots. December, February.

Little Muscat.

Little Musk, Primitive, | Petit Muscat, Muscat Petit.

Foreign. Small, turbinate, yellow, dull red cheek. July.

Louise Bonne.

Louise Bonne Réal, | St. Germain Blanc.

Foreign. Large, pyriform, pale green. December.

Marulis.

Marcellis.

Foreign. Small, roundish, greenish yellow. September.

Madotte.

Foreign. Large, pyriform, yellow. October.

Messire Jean.

Monsieur Jean, Messire Jean Gris, Messire Jean Blanc, | Messire Jean Doré, Mr. John, John.

Foreign. Medium, turbinate, yellow, brown russet. November, December.

Marie Louise Nova.

Foreign. Large, pyriform, yellow, with red cheek. September.

Michaux.

Compte de Michaux.

Foreign. Medium, roundish, yellowish green. September, October.

Moor Fowl Egg.

Little Swan's Egg, | Knevett's New Swan's Egg.

Foreign. Below medium, roundish, dull green. October.

Muscat Robert.

Poire a la Reine, D'Ambre, St. Jean Musqueé Gros, | Musk Robine, Early Queen, Queen's Pear.

Foreign. Small, roundish pyriform, greenish yellow. July.

Muskingum.

American. Large, roundish obovate, greenish yellow. August, September.

Naumkeag.

American Medium, roundish, yellow russet. October.

Neil.

Colmar Neil, Beurré Neil, | Poire Neil, Colmar Bosc.

Foreign. Large, obovate pyriform, pale yellow. September.

Oliver's Russet.

American. Small, obovate, roundish, yellow, red russet. October.

Owen.

American. Medium, roundish oval, dark green. November. (Cole.)

Pailleau.

Foreign. Medium, pyriform, greenish yellow. September.

Pitt's Prolific.

Pitt's Marie Louise, | Pitt's Surpasse Marie.

Foreign Medium, oblong pyriform, yellow and brownish red. September.

Pope's Quaker.

American Medium, oblong pyriform, yellowish russet. October.

Pope's Scarlet Major.

American. Large, obovate, yellow, red cheek. August.

Princess of Orange.

Princesse d'Orange, | Princesse Conquete.

Foreign. Medium roundish, reddish russet. October, November.

Queen Caroline.

Reine Caroline.

Foreign. Medium, oblong pyriform, greenish yellow. November.

Queen of Pears.

Reine des Poires.

Foreign. Large, obtuse pyriform, greenish yellow. September, October.

Quilletette.

Foreign. Below medium, roundish, greenish, dull russet. November.

Roussélet de Meester.

Ferdinand de Meester.

Foreign. Medium, roundish, yellow, pale red in sun. October. There is another of this name, large, pyriform, greenish yellow, but ripening at same time, and unworthy.

Rousselet of Rheims.

Rousselet, | Spice or Musk Pear,
Petit Rousselet, | Late Catherine.

Foreign. Small, ovate pyriform, yellowish green, brown red. September.

Rousselet.

Large Rousselet | Gros Roussele.

Foreign. Medium, obtuse pyriform, greenish, russety. August.

Raymond.

American. Medium, obovate, yellow, red in sun. October.

Styrian.

Foreign. Large, pyriform, yellow, red cheek. October.

Sugar Top.

July Pear, | Prince's Sugar Top,
Harvest.

Small, roundish ovate, yellow. July.

Summer Bon Chretien.

Bon Chretien d'Eté, | Richard's Beurré,
Summer Good Christian, | Musk Summer Bon Chretien.

Foreign. Large, uneven pyriform, yellow, faint blush. August, September

Summer Rose.

Epine Rose, | Caillot Rosat d'Eté,
Poire de Rose, | Epine d'Eté Couleur Rose,
Caillot Rosat, | Thorny Rose.

Foreign. Below medium, round obovate, yellow, red russet. August.

Sucree de Hoyerswerda.

Sugar of Hoyerswerda.

Foreign. Medium, oblong obovate, yellowish green. August.

Summer Thorn.

Epine d'Eté, | Fondante Musquée,
Satin Vest.

Foreign. Medium, pyriform, greenish yellow. September.

Summer St. Germain.

Short's St. Germain, | St. Germain de Martin,
St. Germain d'Eté.

Foreign. Medium, obovate, pale green. August, September.

Sullivan.

Foreign. Medium, oblong pyriform, greenish yellow. September.

Swan's Egg.

New Swan's Egg.

Fruit below medium, oval obovate, pale green, dull brown. October.

Swiss Bergamot.

Bergamot Suisse.

Foreign. Medium, roundish, striped pale green, yellow, and red. October.

Sylvange.

Bergamot Sylvange. | Green Sylvange.

Foreign. Medium, roundish obovate, dull pale green. October.

Tarquin.

Foreign. Medium, oblong pyriform, dull yellow. December, February.

Van Buren.

American. Large, obovate, yellow, red in sun. October.

Vallee Franche.

De Vallée, | De Keingheim.

Foreign. Medium, obtuse pyriform, pale yellowish green. August.

Virgouleuse.

Poire Glace, | Chambrette, Bujaleuf.

Foreign. Large, oval obovate, yellowish green, gray dots. November, January.

William. (Edward's.)

American. Medium, obtuse pyriform, yellow, dotted with red. September.

Windsor.

Summer Bell, | Konge.

Foreign. Large, pyriform, dull yellowish green. August, September.

Whitfield.

Medium, obovate, yellowish brown. October.

Wurzur.

Wurzur d'Autumn.

Foreign Medium, pyriform, yellowish, russeted. November.

Winter Orange.

Orange d'Hiver.

Foreign. Medium, roundish, yellowish green. November, January.

Yat.

Yut'a.

Foreign. Small, pyriform, brownish russet. September.

Zoar Flat.

American. Small, obovate, green. September, October.

THE PLUM.

Prunus domestica, L. *Rosacea* of Botanists.

The Plum is found in a wild state throughout the middle sections of this country, but the original parent of the cultivated varieties is supposed to have come from Asia Minor. The fact of production in our States of many varieties esteemed among the best, attests the adaptedness of both soil and climate.

Propagation—*By seed.*—The gathering, preserving, and planting of the plum is the same as we have described under head of peaches, to which, therefore, we refer the reader. Of the best varieties for producing stocks on which to bud, any free-growing sorts may be taken; avoiding, except wanted for forming dwarf trees, those of slow habit, and in all cases avoiding the damsons. The wild red or yellow (*P. Americana*) is much used by many nurserymen, but it should always be worked just at or rather below the collar. Seedlings from it often answer to work the same season, and we have seen them used with advantage as stocks for the peach. The Chickasaw (*P. chicasa*) is used at the South, where it is a native. New varieties have thus far been produced from chance seedlings; no person, to our knowledge, in this country, having exerted themselves to the production of varieties with any special view to the preserving of separate or combined characters.

By Budding.—The plum is generally and best propagated in its varieties by budding. This should be performed in the month of July. Strong stocks of free-growing sorts should be especially selected for inserting buds of such varieties as Green Gage, Purple Favorite, &c., &c.

By Grafting.—Where budding can be done, we should prefer never to graft. But it not unfrequently happens among nurserymen, that owing to some causes buds fail, and this, too, when the stocks if left until another budding season would become too large. They may therefore be grafted with success and profit, by cutting them off just at the collar, and grafting early in the month of March, drawing the earth up around the graft, and leaving only one bud out. Tan, bark, saw-dust, or other mulch should be placed on the ground, and free-growing sorts, as Imperial Gage, Lombard, &c., should only be used. Grafting on pieces of roots is sometimes

practised, and as successfully, if free-growing kinds only are used, as in the apple; it is also done in same way: we cannot recommend it.

Transplanting and Distance Apart.—The plum tree is perfectly hardy, and we prefer in all cases to transplant in the fall, say October. The shoots of the year should be cut back to form a round regular head, and all small or slender-grown shoots cut out; The roots, with exception of tap-root, should only have the ends trimmed smooth, the tap-root should be cut out. The distance apart of the plum depends very much on the variety; such sorts as Green Gage, Cloth of Gold, &c., requiring only to be about fifteen feet apart, while the Imperial Gage, Washington, &c., would be better at twenty feet.

Soil and Situation.—The soil generally recommended for successful growth and fruiting of the plum is denominated heavy clay; this, by some, is construed to mean a soil so devoid of sand as to bake and crack open after periods of heavy rain; we have been unable to perceive any special difference in the success of growers in varied soils, relative to the growth, hardihood, or bearing habit of trees. That certain elements are requisite in the soil, wherever a tree is planted, to supply suitable food for the growth and perfecting of both fruit and wood, we do not doubt; but as yet, we are to learn that a cultivator who plants on clay soil will be any more successful either in health of trees or procuring a crop of perfect fruit, than he who plants on what is termed usually a light or sandy soil, and supplies that soil, if deficient, with the elements requisite for the plant to support health. Analysis of the plum tree and fruit has not, to our knowledge, as yet been made. The trees appear to grow, both in nursery and orchard, equally well on sandy as on clay soil: the insect curculio, and the leaf-blight or defoliation of the trees in July and August, black warts, &c., &c., are equally injurious in one as the other location. Native wild trees are found growing in all soils, and in our rambles we have met with trees equally healthy and productive, equally attacked in fruit by curculio, and rot or decay, in leaf-blight and black knots, in all soils, from strong clay, through all intermediates, to sandy soils. We therefore say, plant the plum in any good soil which is well drained. The situation suited to the plum is that where the soil is well drained, and where the most convenient.

Pruning.—The plum grown as a standard tree, with head formed four to six feet high, requires little pruning, except to shorten back each summer or spring such shoots as are becoming too vigorous and likely to destroy the regular form of the tree, or to cut out weakly-growing and unripened shoots. A round-headed tree, with

branches formed at two feet from the ground, we consider best. In order to have this, trees one year old from the bud are best to begin with; the stem cut off so as to let two buds start at about two feet from ground, then shortened back one half the next year. After which, if the tree is of the slow or slender-growing varieties, it will need no farther pruning than the above-named standard. If it is of the strong, rampant-growing kind, it will require both root-pruning, (i. e., passing round the root of the tree in a circle distant from the body two feet for a tree of ten feet high, and with a long, sharp spade, cut off all the roots,) and at same time shorten back the year's growth one half. This is best done in August. This mode is especially calculated for the Western prairies and the warm Southern States.

Cultivation.—Like all other fruit trees, the plum does best when the ground is often dug or hoed around. Many growers are also of impression that frequent stirring the soil prevents attacks of curculio. Trees planted where swine have run among them are generally healthy and fruitful; but whether it is owing to the stirring of ground by their rooting, or food supplied the plants in their excrement, is yet a question undecided.

Manures.—The plum requires abundant food in the soil, and this is generally best supplied by animal manure; and where abundant supply of animal manure has been given, salt will be found highly beneficial: the proportion should be controlled somewhat by the quantity of animal matter contained in the soil; but a dressing of half an inch deep over the whole ground, if applied in the spring, may be regarded as a medium. The benefit to the tree of this application will be in its tendency to an equable state of moisture in the soil. Ashes, in soils devoid of lime and the phosphates, will be found beneficial: two bushels to a tree twelve feet high, and in bearing state, will be a guide; larger trees requiring more, and smaller ones less. Brewers' grains are also valuable as a manure, when they can be obtained at prices corresponding with the value of animal manures.

Diseases.—*The Black Warts*, *Knots*, or *Black Gum*, is a disease affecting many plum trees at the North. In the Southern States it is not yet much known. Its cause is variously attributed—by some to insects, (*membracis bubalis.* See Harris's Treatise on Insects;) by some to inherent cause from its parent; by some to temperature and atmospheric change on the health and vigor of the tree; and by others to a diseased state of sap. After noting that it first appears in a neighborhood on trees grown from suckers, or propagated on sucker or unhealthy stocks, we are inclined to a support of the last-named cause. Trees in a judicious, rather

high state of cultivation, and grown or worked on good, healthy seedlings, are rarely subject to it. And a tree diseased by inoculation may be recovered by appliance of abundant food at the roots, cutting away the apparent knots, and washing the wounds either with salt or copperas-water. The latter is best. And if, also, the whole tree be watered with a solution of one ounce of copperas to two gallons of water, the *knots* will disappear.

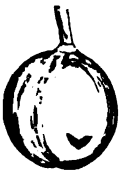
Defoliation of both seedling stocks and bearing trees, in the months of July and August, we believe is caused by want of some specific ingredient in the soil. We have cured it by dressing with ashes, and by watering with copperas-water as above named. When animal manures and salt have been used, we have never seen the foliage drop.

Rot or Decay of Fruit is often a very serious drawback to the sanguine expectations of the fruit-grower. We have supposed it to arise from atmospheric influence, and to pervade the fruit in like manner as fever and ague does the human frame, but have been compelled to relinquish this theory. Latterly we are inclined to the belief that it has its origin in too great exhaustion of the supplies of the tree, by reason of excess of quantity; as trees that have come under our notice on which only a moderate quantity of fruit was permitted to mature have apparently been free, while those overloaded, and only moderately, or not additionally, supplied with food, have decayed.

Our friend, Professor Kirtland, with some friends of science, have, however, lately pronounced it a species of fungus.

Insects *injurious*.—The Egeria, which is noted under head of peaches, sometimes, but rarely, attacks the plum. We refer to that head for its remedy. The Curculio, or Plum Weevil, (*Rhynchænus Nenuphar*,) is an insect so destructive as in some sections to have caused orchardists to cut down their plum trees and replant with different fruit. Again, there are sections where the insect, although known, appears not to increase, or injure fruit, materially to affect the crop. It was unknown in the Western States until within a few years past, but now pervades all sections, even to destruction oftentimes of the wild plum. It has been thoroughly described in "Harris's Treatise on Insects;" and so much is written yearly relative thereto, that one entire book of four hundred pages would not contain it. Our accompanying figure represents the insect in its natural size, i. e., about one quarter of an inch long, of a grayish brown color, the wing-covers forming two little humps, giving a rounded appearance to it, resembling a ripe hempseed. The head has a long rostrum, beak, or snout, projecting, with which it punctures the fruit, as represented by the crescent-shaped mark on the fruit in our engraving. Early in the month of

June the curculio commences his task of propagation, and his mark will then be found near the apex of the fruit, at this time not much larger than a pea; as the fruit increases in size, the marks newly made will be found gradually approaching the stem, until in July, near the close of his labors, they will be found very near the stem. These last marks in July are not often found, as they are produced only from a few insects which have escaped late from the larva state, or, as some say, have, owing to shallow imbedding in the earth and great heat, been transformed from eggs deposited the same season.



The eggs, one of which is deposited in each crescent mark, soon hatches into a small white larva, which enters the body of the fruit and feeds upon it, causing, usually, its premature fall to the ground.

The period at which the young fruit falls, after being punctured, varies with its age at the time of the injury. The earlier portions drop in about two weeks; but if the stone is hard when the egg is laid, the fruit remains till near the usual period of ripening, sometimes presenting a fair and smooth exterior, but spoiled by the worm within.

The insect, soon after the fall of the fruit, makes its way into the earth, where it is supposed to remain till the following spring, when it is transformed into the perfect insect or beetle, to lay its eggs and perpetuate its race.

The curculio travels by flying, but only during quite warm weather, or at the heat of the day, at which time a person lying flat upon his back under a tree, and perfectly still, can observe their movements. If the least motion or noise is made, they remain inactive. The insects mostly confine themselves to certain trees, or to the same orchard. But the fact that newly bearing and isolated orchards are soon attacked, clearly shows that in occasional instances they must travel considerable distances. Indeed, they have been known to be wafted on the wind for a half mile or more, the windward side of orchards being most infested, immediately after strong winds from a thickly planted plum neighborhood. In the cool of the morning they are nearly torpid, and can scarcely fly, and crawl but slowly; hence, at this time of the day they are most easily destroyed.

The plum alone is, however, not the only fruit subject to attack from this insect, but the peach, apricot, nectarine, and cherry, all suffer; and, when a scarcity of fruit, then the tender branches of the oak, wild plum, and other trees, receive the egg, and dropping the same, after a period, to the ground, its regular transformations are continued, and the succeeding season the natural instinct of the insect leads it to the fruit again.

The preventives to injury from the natural instinct and course of

the curculio are recorded in number more than we care to recount. Suffice it that, as yet, no certain agent or preventive has been found; trees, to our knowledge, this year producing abundant crops, when no specific disinfecting agent has been applied, while trees forty rods distant have all their fruit destroyed. Salt, sulphur, lime-water, etc., etc., as variously recommended, is not a certain specific; and he who uses is just as liable to lose his crop of fruit as he who uses not. Hanging iron hoops in the trees, etc., etc., is a little like the old Salem practice of nailing horse-shoes over the door; and the one as valuable as the other. The natural instinct of the insect teaching it to seek such place of deposit for its egg as will insure successful production, avoids all trees where the soil is daily stirred underneath, or where causes are that the fruit shall drop ere required by the larvæ of the insect; hence the value of plantations made where swine are to run, or the planting of single trees where daily passing subjects them to chance loss of fruit. So also that of paving, and of trees standing on sites where water becomes the recipient of falling fruit. Heavy soils are just as much subject to destruction of plum from curculio as light soils. Soils termed wet are less subject; but here the tree does not flourish as well. In large orchards, where there is much fruit to save, a man constantly employed with a pole of about ten feet long, having a small cup or basin fastened at one end, passing from tree to tree and scattering dirt freely, will well repay the cost, in the amount of fruit saved; while, for small gardens, the plan first introduced, more than twenty years since, by one of the most estimable horticulturists of the States, David Thomas, of New-York, is the best. It is, in first preparing a short pole, having at one end a cushion made of several thicknesses of cloth or India-rubber; place this cushion against the body of the tree early in the morning, (having first spread a sheet or large cloth on the ground, the diameter of the branches;) then strike the end with a heavy mallet: the jar causes the insect to drop on the cloth, when it may easily be gathered and destroyed.

Uses.—The best varieties are by many esteemed delicious for the dessert. Others, and even the unripe fruit, are used in pies, tarts, conserves and sweetmeats. Our own taste compels us to place the plum in the lowest scale of cultivated fruits, and mainly from the fact that, unless perfectly ripe and fresh from the tree, if eaten in a raw state, they tend to flatulence and disease. Dried or cooked, they are regarded valuable, and are an article of considerable commerce as imported to this country under name of French prunes or dried plums. By a selection of the richest varieties, there is no doubt that prunes superior to those of foreign preparation might be easily obtained. The following description of an oven purposely built for prunes, and doubtless, with some modifications, well adapted

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heat obtained by a
icular attention of

rtant article of com-
, they must be *sud-*

any prepare their
I have put up, for
g apparatus, which,
ed to recommend;
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the annexed draw-
natory description:
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ed by a brick wall
ck, so that the whole
d, (see figs. 1 and
ctly six feet every
front wall, *n*, being
a foot in thickness.
, the vault is arched
six inches of brick-
e crown of the arch.
i i, are about four-
es square. The hur-
st upon shelves fixed
rested upon *rollers*,
dmit of their being
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se. These lines of
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t; they may be made
wood, but it will be
the bottoms are of
, like shelves. Their
such that they may
anaged by a woman;
eparing prunes on a
e, let them be made
r length and breadth,
just come within the
a more robust person.

"The wooden frame, *h h*, is that on which the two doors are hung. The door, *g*, which covers the arch, (and which is represented in the cut as open and fastened up,) shuts up the front of the upper part of the oven. In the middle of this upper door or flap is a round vent-hole, for the escape of the moist vapor. *k* is an iron damper or slide, to be placed in the flue at *l l*, in order to regulate the heat.

"A thousand fully ripe quetsches (prune plums) make about ten pounds of dried prunes.

"Plums of different kinds may be dried, either whole or deprived of their skins and stones. In the latter case, they are styled *prunelles*."

CHARACTERS AND CLASSFICATION.—The characters of the plums are represented by the texture of the flesh as combined with its juiciness and flavor; and what are termed gages (a word really of no meaning as applied to the fruit) represent fruits of round form, very delicate, and of a rich, sugary, jnicy, high flavor. The prunes are known as those fruits that are dry in the texture of their flesh. The character of size is one of which Washington may be taken as *large*, Green Gage as *medium*, and Mirabelle as *small*; while the wood being *smooth* or *downy*, needs no explanation, and the depressed line on one side, called a *suture*, is the same as in cherries or peaches, and often serves as a guide in detecting varieties. The classification by most writers of divisions of green, white, or yellow, and of blue, or red, or purple, we adopt only in our text descriptive of each distinct variety; preferring as a practical matter, here as elsewhere in our work, to follow that of, in short, best, very good, and good.

VARIETIES.—These are far too numerous for any practical use; and while we may have possibly reduced too much, we yet feel that the uses and wants of community will be best supplied in this fruit by a few really valuable, and for the particular purposes pointed out in our text descriptive.

CLASS I.—*Worthy General Cultivation.*

BLEECKER'S GAGE.

German Gage.

RAISED at Albany, N. Y., about forty years since, by Mrs. Bleecker. The tree is of healthy, hardy habit, and a regular, sure bearer. *Branches*, downy; *leaves*, dark green; *fruit*, medium size, roundish oval, very regular; *suture*, slight; *skin*, yellow, with numerous imbedded white specks, and a thin white bloom; *flesh*, yellow, rich,

sweet and luscious flavor, separating freely from the stone, which is pointed; *stalk*, an inch or more long, downy, inserted in a slight cavity. *Season*, last of August here; in Georgia, first of July. Distinguished from Prince's Yellow Gage by its larger stalk and later maturity.

Coe's Golden Drop.

Bury Seedling, | New Golden Drop,
Coe's Imperial, | Fair's Golden Drop,
Golden Gage.

This is an English variety. Tree only moderately productive; and although we should always plant, yet it does not always mature perfectly north of 40° latitude. *Branches*, smooth; *fruit*, large, oval; *suture*, well marked, one side enlarged; *skin*, light yellow, much dotted or mottled with red on side exposed to sun; *flesh*, adhering to the stone, yellowish, firm, rather coarse-grained, but rich and sweet; *stalk*, three-fourths to an inch long, rather stiff. *Season*, last of September. The Yellow Egg is often grown under this name at the West.

Denniston's Superb.

A variety originated in the famous garden of Mr. Denniston, Albany, N. Y. Its great productiveness, together with its period of ripening, more than its quality, makes it desirable. *Branches*, downy; *fruit*, medium, or rather above, roundish, slightly flattened; *suture*, distinct; *skin*, pale yellowish, overspread with a thin bloom, and mottled or clouded with purple; *flesh*, thick, not juicy, but with rich vinous flavor; *stone*, small, roundish, from which the flesh parts freely; *stalk*, three-fourths inch long, set in a cavity of moderate depth. *Season*, 15th to 20th August.

Early Orleans.

Wilmot's Early Orleans, | Grimwood's Early Orleans,
New Early Orleans, | Hampton Court,
New Orleans, | Monsieur Hatif.

An English variety, which on account of its quality and early maturity must always make it popular as an orchard fruit. *Branches*, downy; *fruit*, medium, round oval; *suture*, shallow; *skin*, dark reddish purple; *flesh*, yellowish green, of rich, brisk flavor, and separating freely from the stone; *stem*, usually about half inch long, but varying. *Season*, first August.

Green Gage.

Ida Green Gage, | Wilmot's Green Gage,
Waterloo, | ——— New Green Gage,
King of Plums, | Brugnon Gage,
Wilmot's late Green Gage, | Bruyn Gage,
Schuyler Gage, | Bradford Gage,
Rensselaer Gage, | Reine Claude,
Isleworth Green Gage, | Grosse Reine Claude,
Grosse Reine.

"During the last century, an English family by the name of *Gage*

obtained a number of fruit trees from the monks of Charteuse, near Paris. Among them was a tree of this plum, which, having lost its name, was called by the gardener the Green Gage." There are very few trees in bearing of the true variety at the West, the Imperial Gage having been often sold as Green Gage. The true variety is readily known by its short-jointed, slow-growing, spreading, and dwarfish habit. It also requires a rich, warm soil to insure fruit in perfection in locations north of 42 deg. *Branches*, smooth; *buds*, with large shoulders; *fruit*, medium, round; *suture*, slight; *skin*, yellowish green, marbled and dotted on the sunny side with red; *flesh* separates freely from the stone, pale green, exceedingly melting, rich, sprightly, high flavor; *stalk*, slender, slightly inserted. *Season*, midddle to last August.

Imperial Gage.

Prince's Imperial Gage, Flushing Gage, | White Gage, Jenkinson's Imperial,
Superior Green Gage.

This is an American variety, originating at the old nursery of Wm. Prince, Flushing, N. Y. In heavy, strong soils it is sometimes deficient in flavor, probably from a deficiency of some particular element in the soil, as it produces abundantly, grows vigorously, and trees apparently healthy. In light, loamy, or even dry, poor soils, it is a hardy, productive variety, and the flavor often almost equalling a true Green Gage. As a market variety, it is far superior to Green Gage, and hardly surpassed by any other plum. *Branches*, slightly downy, dark-colored, upright, vigorous; *fruit*, above medium, oval; *suture*, distinct; *skin*, at first pale green, with a white bloom, becoming yellowish green, marbled with dark green stripes; *flesh*, greenish, juicy, rich, sprightly flavor; *stone*, oval, with flesh occasionally adhering. In good seasons and soils it separates freely from the stone; *stalk*, long, hairy, stout, inserted in an even cavity. *Season*, first September; at the South, July first.

Jefferson.

An American variety, originated by Judge Buel, at Albany, N. Y., probably from a seed of Coe's Golden Drop, which in growth, wood, etc., it closely resembles. It has been pretty extensively tested, both in this country and in Europe, and fully sustains the high character given it by the late A. J. Downing. The Bingham or Clingstone plum has occasionally been disseminated for this variety. In rich, high flavor, it does not equal the Green Gage, but its large size, great beauty, productiveness, freedom from decay, and habit of hanging long on the tree after ripe, render it valuable for all collections. *Branches*, nearly smooth; *fruit*, large, oval, slightly nar

rowed one side toward the stalk; *skin*, at first greenish yellow, becoming golden yellow when fully ripe, and with a rich reddened cheek in the sun, bloom thin, white; *suture*, slight; *flesh*, separating nearly free from the long pointed stone; yellow, almost orange yellow; juicy, with rich flavor; *stalk*, an inch long, inserted without depression. *Season*, last of August; at the South, last of July.

Lombard.

Bleecker's Scarlet. | Beckman's Scarlet.

An American variety, which, as a tree, is thrifty, healthy, hardy, and productive; while the fruit appears less attractive than most others to the curculio. It is therefore very desirable. *Branches*, smooth, bright purple, very thrifty, leaves much crumpled; *fruit*, medium, roundish oval, slightly flattened at ends; *suture*, slight; *skin*, violet red, dusted thinly with bloom; *flesh*, yellow, juicy, not rich, but pleasant flavor; *stalk*, slender, three-fourths inch long, set in a broad, open cavity; adheres to the stone. *Season*, middle to last of August.

Lawrence's Favorite.

Lawrence Gage.

An American plum, raised from seed of the Green Gage by Mr. L. U. Lawrence, Hudson, N. Y. It forms a tree of upright, thrifty growth, and bears young and abundantly of fruit much resembling outwardly the Green Gage, except being larger. *Branches*, downy, short-jointed; *fruit*, large, roundish; *skin*, dull yellowish green, clouded with streaks of a darker shade beneath, and in sun, around the stem a mottling or dotting of brownish red, bloom light bluish green; *flesh*, greenish, juicy, rich, excellent, only surpassed by Green Gage. When fully ripe, separates freely from the stone; *stalk*, half inch long, slender, inserted in a narrow cavity. *Season*, middle August.

McLaughlin.

An American variety, raised by James McLaughlin, Bangor, Maine. The tree is very thrifty, making stout vigorous shoots of four to six feet in a season; but forming a round, regular head. Originating so far north, it will unquestionably prove a most valuable variety for northern culture. The fruit, in character of quality, resembles the variety just previously described. *Branches*, smooth; *leaves*, broad, glossy; *fruit*, above medium, roundish, flattened at ends; *suture*, obscure; *skin*, thin, tender, russet yellow, sprinkled with a red tinge, which deepens to a purplish hue around the stalk; *flesh*, adhering to the stone, dull yellow, firm, juicy, excellent; *stone*,

roundish; *stalk*, three fourths inch long, inserted without depression. *Season*, middle to last of August.

Madison.

An accidental seedling in the Denniston Garden, Albany, N. Y.; and, according to Dr. Herman Wendell, a hybrid from Bleecker's Gage and Blue Gage. Its flavor, late period of maturity, and hardihood, commend it to a first place. *Branches*, slender, smooth; *leaves*, light green, slightly downy; *fruit*, medium, roundish oval; *suture*, slight; *skin*, light orange, with a cast of greenish yellow, in sun mottled and spotted with lake carmine, bloom thin, delicate; *flesh*, yellow, firm, juicy, rich and sweet, agreeable flavor, separates freely from the stone, which is small, oval, pointed; *stalk*, three-fourths inch long, inserted in a regular, not deep basin. *Season*, first to fifteenth October.

Ottoman.

Imperial Ottoman

A foreign variety, but from whence is uncertain. We have fruited it several years, and as an early variety have not met its superior. The trees are hardy, regular, not rampant growers, and regular, abundant bearers. *Branches*, slightly downy; *fruit*, medium, roundish oval, regularly formed; *skin*, greenish yellow, marbled with darker shades in stripes underneath; if permitted to hang it becomes mostly pale yellow, bloom thin; *suture*, only half way down on one side; *flesh*, yellowish, juicy, rich, sweet, delicious, and when fully ripe parts freely from the stone; *stem*, downy, three-fourths inch long, inserted in a cavity of moderate depth. *Season*, last July.

Purple Favorite.

This variety the late A. J. Downing states to have been planted and grown by his father. Although of dwarfish, slender habit, the trees are very hardy, and bear when young. For large market orchards it is not as valuable as some other varieties, but in private gardens it should always have a place. *Branches*, smooth, short-jointed; *fruit*, medium, or rather above, roundish obovate; *skin*, brownish purple, dotted with golden specks, bloom light blue; *flesh*, pale greenish, juicy, sweet and excellent, and separating freely from the stone, which is small; *stalk*, three-fourths inch long, depression slight. *Season*, last of August.

Purple Gage.

Reine Claude Violette, | Violet Queen Claude,
Die Violette Koning Claudie.

A foreign variety, moderate bearer, but high flavor. *Branches*,

smooth, short-jointed; *fruit*, medium, roundish, a little flattened; *suture*, shallow; *skin*, violet, dotted with pale yellow, bloom light blue; *flesh*, greenish yellow, firm, sugary, high flavor; *stone*, oval, compressed, from which the flesh separates freely; *stalk*, an inch long, set in a narrow basin. *Season*, about 10th September, but will hang a fortnight, shrivelling slightly.

Prince's Yellow Gage.

American Yellow Gage, | White Gage, Harvest Gage.

A variety produced in 1783 by the elder Mr. Prince, of Flushing, N. Y. The trees are abundant bearers, and the fruit carries well to market and always sells readily, wherefore one reason for placing it in this class. As a table fruit it is often too dry, and does not deserve to be planted in small gardens where market sales are not contemplated. *Branches*, smooth, short-jointed; *leaves*, glossy; *fruit*, slightly above medium size, oval, broadest near the stalk; *suture*, a mere line; *skin*, golden yellow, little clouded, bloom white, abundant; *flesh*, yellow, sugary, rich, sometimes rather dry, parts freely from the stone; *stalk*, an inch long, set in a round cavity. *Season*, early in August; at the South, middle of June. It is stated, also, at the South to ripen gradually, to be juicy, and of the best.

Red Gage.

An American plum, raised from seed of the Green Gage, by the elder Wm. Prince, in 1790. The tree is of hardy, yet vigorous habit, wood dark reddish color, and producing abundantly a fruit rather small, yet of the best flavor. *Branches*, smooth; *leaves*, crimpled; *fruit*, hardly medium size, oval, rounded; *skin*, brownish red, bloom slight; *flesh*, parting freely from the stone, greenish amber, juicy, sweet, delicious; *stalk*, slender; *cavity*, narrow. *Season*, middle August.

Saint Martin's.

St. Martin's Quetsche.

A German fruit: the word quetsche, or prune, not applying to this fruit, we prefer to drop it. It is a juicy, not a dry prune plum. The trees are good bearers, and the time of ripening makes it profitable for market or preserving. *Branches*, smooth; *fruit*, medium, or rather above, ovate, broadest at base; *skin*, bright yellow, dotted a little with brownish red in the sun, bloom white; *flesh*, yellowish, juicy, rich, excellent. *Season*, 1st October, but will hang two weeks.

Schenectady.

Schenectady Catherine

An American plum, originated at Schenectady, N. Y., and first in

troduced to notice and described by Dr. Herman Wendell. Tree, thrifty, hardy, and prolific. *Branches*, smooth, rather slender; *fruit*, above medium, roundish oval, broadest and slightly depressed at stem end; *suture*, shallow; *skin*, rich, deep purple, slightly netted on the sunny side; *flesh*, greenish yellow, fine-grained, melting, juicy, rich, sweet, delicious flavor; *stone*, small, thick, ovate, parts readily from the flesh; *stalk*, three-fourths inch long, rather slender, inserted in a deep, narrow cavity. *Season*, last August.

Washington.

Bolmar,	Franklin,
Bolmar's Washington,	Parker's Mammoth,
New Washington,	Irving's Bolmar.

The original tree of this variety grew on what, in 1818, was known as Delancey's Farm, and now constitutes a portion of New-York city, known as the Bowery. It was introduced to notice, grown and distributed by Michael Floy, Esq., American Editor of Lindley's Guide to the Orchard. Without possessing high flavor, the uniform hardihood of the tree, with its productive habit, large size of fruit, and often freedom from attack of curculio, renders it a most popular variety, and for market deservedly so at the North. In Georgia, and other sections South, it is said to be entirely flavorless and dry, so that while we cannot avoid placing it in the first list, it is requisite to give this qualification. *Branches*, downy; *fruit*, large, round ish oval; *suture*, obscure, except near the stalk; *skin*, dull yellow, with faint marblings of green, and on the sunny side some little red, often dotted; *flesh*, yellow, firm, sweet, and separating freely from a pointed stone; *stalk*, nearly three-fourths inch long, downy, planted in a wide, shallow basin. *Season*, last of August.

Class II.—*New and untested; suited to certain localities, or grounds of extensive Amateur Pomologists.*

Autumn Gage.

Roe's Autumn Gage.

American. Productive, branches smooth. Fruit medium, oval, broadest at base, pale yellow, whitish bloom, flesh greenish yellow, juicy, sweet, separates freely from a stone long, compressed, and pointed at both ends; stalk three-fourths inch long. September 15.

Albany Beauty.

Denniston's Albany Beauty.

American. Branches slightly downy. Fruit below medium, roundish

oval; skin whitish green, with purple dots, bloom thin; flesh yellow, rich, sweet, not juicy, separates freely from a small pointed stone; stalk slender, one inch long. Last August.

Blue Impératrice.

Impératrice, Véritable Impératrice, | Impératrice Violette, Violette.

Foreign. A fine variety, almost worthy the first class. The true Blue Impératrice must not be confounded with Semiana or Blue Impératrice of some eastern growers. (See Semiana.) Branches smooth, long, slender. Fruit medium, obovate, tapering to the stalk, deep purple, bloom blue, thick; flesh greenish yellow, rich, sugary, hangs long on the tree, adheres to the stone. Last September.

Bingham.

American. Productive, branches downy. Fruit above medium, oval, deep rich yellow, dotted with red in the sun; flesh yellow, juicy, rich, delicious, adheres to the stone; stalk three-fourths inch long, slightly sunk. Last August.

Blue Plum.

Branches smooth; leaves rather small; tree productive. Fruit medium, roundish, scarcely oval; suture obscure, dark blue, light blue bloom; flesh yellowish green, juicy, sweet, adheres to the stone; stalk three-eighths inch long, inserted in a shallow cavity. Season middle July, in Georgia; middle August, here. Propagated by suckers. Description by W. N. White, Athens, Ga.

Buel's Favorite.

American. Branches smooth. Fruit large, ovate; suture half round, pale green, little red next the stalk; flesh greenish yellow, firm, juicy, adhering to a long pointed stone; stalk three-fourths inch long. Last August.

Cherry.

Early Scarlet, Myrobolan, Virginian Cherry, Der Virginia, | D'Amérique Rouge, Prunus Myrobolana, Prunus Cerasifera, Miser Plum, Golden Cherry.

A variety of which many sub-varieties have been and are constantly being produced from seed. Its chief merit is in the tree being ornamental, and the fruit maturing early. Being very pretty for the dessert, commands ready sale. It requires root-pruning every two years, in order to make it productive. Branches smooth. Fruit small, round, yellow and red, shaded and mottled; flesh greenish, juicy, pleasant, adhering closely to an oval stone; stalk short, cavity narrow. Middle of July. The Chickasaw Plum (*Prunus chicasi*) is very similar to this.

Cloth of Gold.

Drap d'Or, | Mirabelle Grosse,
Mirabelle Double, | Yellow Perdrigon.

Foreign. Productive, branches slightly downy. Fruit below medium, round; suture indistinct; skin bright yellow, crimson specks in sun; flesh yellow, sugary, rich, adheres slightly to the stone. Early August.

Columbia.

Columbian Gage.

American. Valuable market sort, productive, succeeds well South; branches downy. Fruit large, globular, one side enlarged; skin brownish purple, with fawn-colored specks, blue bloom; flesh orange, rather coarse, dry but sugary, separates freely from stone, which is small, compressed; stalk an inch long; cavity small, narrow. Last August.

Cooper.

Cooper's Red, | Cooper's Large Red,
Cooper's Large American.

American. Described by Coxe, in 1817, as grown from a stone of Orleans. Some writers state it to be identical with "Smith's Orleans;" but we do not so consider it. Fruit large, deep purple, with a bloom; suture shallow and broad; stem three-quarters inch long; flesh coarse, yellow, "good." Last August.

Cruger's Scarlet.

Cruger's, | Cruger's Seedling,
Cruger's Scarlet Gage.

American. Productive, and comparatively free from attacks of curculio. Branches downy. Fruit little above medium, roundish oval; skin lilac red, with thin bluish bloom and yellow dots, in dark shade one side, pale fawn color; flesh orange, rather dry, rich, separates free from stone; stalk half inch long; basin shallow. Last August.

De Montfort.

Foreign. Branches downy. Fruit above medium, roundish, light purple, spotted with brownish yellow, and with blue bloom; flesh light yellow, rich; when fully ripe, parts freely from stone; stalk half inch long. Middle August.

Denniston's Red.

American. Branches smooth. Fruit medium, roundish oval; suture half round; skin light red, with fawn-colored dots, bloom thin; flesh amber color, separates freely from a small, oval, compressed stone; stalk long, slender. Last August.

Downton Imperatrice.

Foreign. Branches smooth, valued for preserving. Fruit medium,

oval, narrowing to the stalk, pale yellow; flesh yellow, melting; unless fully ripe, acid, then sweet, adheres to the stone; stalk three-fourths inch long. Last of September. Sometimes grown as Yellow Egg.

Domine Dull.

German Prune, | Dutch Prune,
Dutch Quetzen.

American. From seed of the Dutch Prune; productive and valuable for drying; branches smooth. Fruit medium size, long oval; skin dark purple, nearly black, with blue bloom; flesh yellow, juicy at first, if allowed to hang on the tree becomes dry, rich and sweet, adheres to stone; stalk an inch long. September.

Duane's Purple.

Duane's Purple French, | English Pond's Seedling.

Foreign. Branches downy. Fruit large, oblong oval, one side enlarged, reddish purple in sun, pale red in shade, dotted with yellow specks, lilac bloom; flesh amber color, juicy, slightly acid, adhering to the stone; stalk three-fourths inch long, slender, narrow cavity. Early August.

Early Royal.

Royal Native, | Mirian.

Foreign. Slow grower, and tender tree far North; branches downy. Fruit medium, roundish, light purple, dotted little with dull yellow; flesh amber color, rich, parts from stone; stalk half inch long, stout; stone small. Last July.

Emerald Drop.

American. Productive; branches smooth. Fruit medium, long oval, one side enlarged, yellowish green; flesh greenish yellow, juicy, adheres to the stone; stalk three-fourths inch long. Last August.

Early Purple.

Sea.

Foreign. Fruit small, roundish, brownish purple, with a scanty light-colored bloom; flesh greenish yellow, highly perfumed, sweet, juicy, parts freely from stone. Early June at South, July here. (W. N. White, in Horticulturist.)

Elfrey.

Elfrey's Prune.

American. Very productive, always valuable for drying, often very fine for the dessert, succeeds admirably at the South; branches smooth. Fruit rather below medium size, oval, blue; flesh greenish, sweet, parts freely from stone. Middle August; South, first July.

Early Favorite.

Rivers' Early No. 1.

Foreign. Branches downy. Fruit medium, roundish oval, purple; flesh melting, rich, sweet. Early August.

Early Prolific.

Rivers' Early No. 2.

Foreign. Branches smooth. Fruit little above medium, roundish oval, purple; flesh yellowish, rich, sweet, excellent flavor. Early August.

Frost Gage.

American. Does not answer well in soils of only moderate richness, requires rich, moist, clayey soil. On the borders of the Hudson river, where it originated, it is one of the most valuable late-ripening market varieties. Branches smooth, slender, upright habit. Fruit below medium, roundish oval; suture half round, deep purple, bloom thin; flesh greenish yellow, juicy, sweet, adhering to stone; stalk three-fourths inch long. First October.

Galbraith.

An early plum, said to have originated with the late Mr. Galbraith, near Boalsburg, Pa.; and is represented as being a straggling grower, but the best early plum cultivated in that vicinity. An inch and a half long by one and five-sixteenths broad, oval, purple; stem five-eighths of an inch by one-fourteenth; flesh tender, juicy, adherent to the stone, flavor luscious, quality "very good" if not "best." (W. D. B.)

Huling's Superb.

This variety we have little doubt will eventually command a place in the first class: at present it has been little grown; Duane's Purple being almost invariably the variety distributed under this name. Leaves broad, large; branches stout, downy, with a swollen knob behind each bud. Fruit very large, roundish oval, shallow suture; skin dull greenish yellow, covered with pale bloom; flesh greenish yellow, little coarse grain, rich, brisk, sprightly flavor, adheres partially to the stone; stalk an inch long, swollen at its junction with the tree, and set in a round, small cavity. Middle August.

Howell's Early.

American. Branches slender, gray, downy. Fruit below medium, oval angular; suture indistinct, light brown, greenish yellow in the shade, thin blue bloom; flesh amber color, juicy, sweet, separates freely from a small oval stone; stalk three-fourths inch long, slender. Last July.

How's Amber.

American. Branches slightly downy. Fruit medium, roundish; skin

amber color, dotted and mottled with rose; flesh yellow, a little coarse, adhering to the stone, rich, fine flavor. Season last August. (Hov. Mag.)

Howard's Favorite.

American. Fruit large, roundish obovate, slight neck; stem one inch; color orange yellow, shaded with red, and reddish spots; flesh yellow, juicy, sub-acid, "good." September. New.

Hudson Gage.

American. Somewhat like Imperial Gage, but earlier. Branches downy. Fruit medium, oval, enlarged one side; suture obscure; skin yellow, clouded as if underneath with stripes of green; bloom white; flesh greenish, juicy, sprightly, and mostly parts from the stone, which is small; stalk half inch long. Early August.

Imperial of Milan.

Imperiale de Milan.

Foreign. Fruit large, oval, deep purple, juicy, sugary. October. (T Rivers, in Hort.)

Isabella.

Foreign. Branches downy. Fruit above medium, oval, dull red, mottled; flesh yellow, rich, juicy, parting freely from the stone when fully ripe; stalk three-fourths inch long. Last August.

Ickworth Imperatrice.

Knight's No. 6.

Foreign. North this does not ripen well; in the Middle and Southern States it promises yet to become a first-class plum, on account mainly of its period of ripening. Branches smooth. Fruit above medium, obovate, purple, with irregular tracings of fawn yellow; flesh greenish yellow, sweet, juicy, and mostly adhering to a small stone; stalk half inch long, thick. Early October. If gathered by hand, wrapped in paper, and laid in a dry place, will keep a month.

Italian Damask.

Damas d'Italie.

Foreign. Productive, succeeds finely South. Branches smooth. Fruit medium, roundish, flattened at base; suture half round; skin violet, becoming brown; flesh yellowish green, firm, sweet, separating from a thick oval stone; stalk half inch long, slender; cavity small. Last August. Bears well in all soils.

Kirke's.

Foreign. Branches smooth. Fruit medium, round, dark purple, thick blue bloom; flesh greenish yellow, firm, rich, separating freely from a broad flat stone; stalk three-fourths inch long. Last August.

Long Scarlet.

Scarlet Gage.

American. Branches downy. Fruit medium, oblong obovate, one side enlarged, tapers toward the stalk, bright red in sun, pale yellowish red in shade; bloom lilac; flesh yellow, rich, juicy, acid, adheres to the stone; stalk three-fourths inch long in a narrow cavity. Last of August. A good market sort, valued for making jelly.

Mirabelle.

Mirabelle Petite, | Mirabelle Jaune.

Foreign. Branches downy. Fruit small, obovate; suture distinct; skin yellow, spotted with red; bloom white; flesh orange, sweet, sprightly, separates from stone; stalk half inch long. Early August.

Mamelonne.

Foreign. Fruit medium, round, with a knob-like protuberance where joined to the stalk, occasional specimens with unequal surface; skin greenish, spotted with red; flesh yellow, juicy, rich, and parts freely from the stone. Early August.

Marten's Seedling.

A variety said by C. Reagles, of Schenectady, N. Y., to have originated there, and to be a yellow plum of the finest quality. We have not seen it.

Mediterranean.

This is also said by Mr. Reagles to be a seedling of Central New York, very large, early and superior.

Morocco.

Early Morocco, | Early Black Morocco,
Black Morocco, | Early Damask,
Black Damask.

Foreign. Moderate bearer. Branches downy. Fruit medium, roundish, shallow suture; skin dark purple; bloom thin; flesh greenish yellow, slightly adhering to the stone, juicy, rich and sweet; stalk half inch long. Early August.

Manning's Prune.

Manning's Long Blue Prune, | Large Long Blue,
Manning's Long Blue.

American. A sub-variety of the German prune, and superior thereto. Branches smooth. Fruit large, long oval, a little one-sided; skin dark purple, thick blue bloom; flesh greenish yellow, firm, rather juicy, sweet, pleasant, separates readily from a long pointed stone; stalk long, slender. September.

Mulberry.

American Branches stout, smooth. Fruit large, oval, narrowing to

the stalk, pale yellow, with dots of red in sun; flesh greenish yellow, coarse-grained, adheres to an oblong pointed stone; stalk an inch long, slender. First September.

Nota Bene.

Corse's Nota Bene, | Dictator?

Canadian. Branches smooth. Fruit large, round, pale lilac or brownish, dull green on the shaded side, bloom light blue; flesh greenish, rather firm, juicy, sweet, separating freely from the stone; stalk half an inch long, in a round basin. First September.

October Green Gage.

Reine Claude Tardive, | Reine Claude d'Octobre.

Foreign. Branches slightly downy. Fruit small, round, yellowish green, marbled and dotted slightly with red in the sun; flesh yellowish, juicy, melting, rich, separating freely from the stone; stalk slender. First to 15th October.

Orange.

Orange Gage.

American. Branches smooth. Fruit very large, oval, flattened at both ends, bronze yellow, clouded with purplish red near the stalk; flesh yellow, coarse-grained, adhering slightly to the stone; stalk three fourths inch long, in a narrow round cavity. Last of August.

Peach Plum.

Prune Peche.

Foreign. Long cultivated at Schenectady, N. Y., as the French plum, it having been received from France, and lost its name on the voyage: was only recognized of late as the old Prune Pêche of French authors. It is tender at the North, and an indifferent bearer. Branches smooth. Fruit very large, shaped much like a peach, one side enlarged, wider than deep, light brownish red, with small yellow dots; flesh pale yellow, coarse-grained, slightly sub-acid, separates freely from the stone, which is round and much furrowed; stalk short. Last July, first August.

Prince of Wales.

Chapman's Prince of Wales.

Foreign. Branches smooth. Fruit medium, oval, bright purplish pink, bloom abundant; flesh pale yellow, sweet, separates from stone. Last August.

Prune of Agen.

Agen Date, Prune d'Agen, | D'Agen, Prune d'Ast, St. Maurin.

Foreign. Valuable only for drying. Branches smooth. Fruit medium,

obovate flattened, purple, with a blue bloom; flesh greenish yellow, sweet; stalk short. October.

Peter's Yellow Gage.

American. Resembles Cloth of Gold. Tree rather longer jointed, and fruit separates freely from the stone. August.

Queen Claude of Bavay.

Reine Claude de Bavay.

Foreign. Branches smooth. Fruit medium, roundish oval, greenish yellow, spotted with red; flesh firm, juicy, sweet, rich, adhering slightly to the stone; stem short. Last September. This variety has been, as we think, over-praised.

Red Saint Martin.

Saint Martin Rouge, | Prunier de St. Martin,
Saint Martin, | Coe's Fine Late Red,
Coe's Late Red.

Foreign. Branches downy. Fruit medium size, roundish; suture half round, well marked; skin light purplish red, thin blue bloom; flesh yellowish, juicy, vinous, separating freely from the stone; stalk three-fourths inch long, stout. October. In Northern locations it does not always mature its fruit.

Red Diaper.

Diaprée Rouge, | Roche Corbon,
Mimms, | Imperial Diadem.

Foreign. Slow grower, branches nearly smooth. Fruit above medium obovate, brownish red and purple, light blue bloom; flesh pale green juicy, melting, very good; stalk slender, slightly hairy, parts free from stone. Last August.

Royale.

La Royale.

Foreign. Branches very downy. Fruit medium or slightly above, roundish, reddish purple, with light brown specks, thick pale bloom; flesh dull yellow, rather firm, juicy, vinous, parts freely from a small roundish stone; stalk three-fourths inch, cavity narrow. Last August, and hangs to middle September.

Royal of Tours.

Royale de Tours, | Royal Tours.

Foreign. Branches downy. Fruit large, roundish; suture deep, giving appearance of one side enlarged, lively red in shade, violet in sun, minute golden dots, blue bloom; stalk stout, cavity narrow; flesh greenish, firm, with abundant juice, adheres closely to large, oval, flattened stone. Early August.

Sharp's Emperor.

Denyer's Victoria, | Queen Victoria.

Foreign. Branches downy. Fruit large, roundish oval, lively red in sun, paler in shade; flesh yellow, separates from stone, pleasant flavor. Middle September.

Thomas.

American. Hovey, in Mag. of Hort., says this is a seedling of Mr. Thomas, Boston, Mass. We take from his description. Branches stout, slightly downy. Fruit large, oblong, flattened at apex, shallow suture, dark amber color, mottled and shaded with red, sprinkled with white dots and whitish bloom; flesh deep yellow, sweet, separating from a large roundish ovate stone; stalk half inch, stout, deeply inserted. September.

Smith's Orleans.

La Delicieuse.

American. Originated by a Mr. Smith, on Long Island, and first described by Prince. As a market plum this is a fine variety, but for dessert it is deficient in richness and flavor on moist strong soils. Branches stout, nearly smooth. Fruit large, oval oblong, largest at base; suture half round; skin deep purplish red, with small golden specks and deep blue bloom; flesh yellow, tender, juicy, adhering closely to a large ovate stone; stalk short, inserted in a deep round cavity. Last August.

Yellow Egg.

Yellow Magnum Bonum,
White Magnum Bonum,
White Egg,
Egg Plum,
White Mogul,
Askew's Golden Egg,
Col. Young's Seedling,
White Imperial,
White Holland,
Wentworth,
Dame Ambert,
" " Jaune,
" " Blanche,
Grosse Luisante.

Foreign. Numerous seedlings are produced from this variety, differing little from the parent. "Long's Yellow" is one considerably distributed West. It is a variety only esteemed for cooking purposes. Branches smooth. Fruit large, oval, narrowing at ends, suture distinct; skin yellow, white dots, and thin white bloom; flesh yellow, adhering mostly to the stone; stalk long, surrounded at insertion by fleshy ring. Middle to last August.

CLASS III.—*Unworthy Farther Culture.*

Apricot.

Apricot Plum of Tours,
Abricotée de Tours,
Abricotée,
Yellow Apricot,
Red Apricot.

Foreign. Branches downy. Fruit medium, roundish, yellow, with red; flesh yellow, bitter. Freestone. August.

American Wheat.

American. Branches smooth. Fruit small, round, blue; flesh greenish. Clingstone. August.

Admiral.

Corse's Admiral.

Canadian. Branches downy. Fruit medium, oval, light purple; flesh greenish yellow. Clingstone. September.

Brevoort's Purple.

New York Purple, | Brevoort's Purple Bolmar,
Brevoort's Purple Washington.

American. Branches smooth. Fruit large, oval, reddish purple; flesh yellowish. Clingstone. September.

Blue Gage.

Azure Native, | Black Perdrigon,
Little Blue Gage.

Foreign. Branches downy. Fruit small, round, blue; flesh greenish. Freestone. August.

Byfield.

American. Branches smooth. Fruit small, round, light yellow; flesh yellow. Clingstone. August.

Blue Perdrigon.

Violet Perdrigon, | Brignole Violette,
Perdrigon Violette, | Battle Monument.

Foreign. Branches downy. Fruit medium, oval, reddish purple; flesh greenish yellow. Clingstone. August.

Beach Plum.

Native of the sea-coast. Fruit small, reddish, astringent.

Croft's Early.

A small reddish blue fruit, with yellow flesh, dry and devoid of flavor. August.

Copper.

French Copper.

Foreign. Branches smooth. Fruit medium, oval, bluish copper; flesh greenish. Freestone. September.

Cheston.

Cheston Matchless, | Matchless,
Violet Diaper.

Foreign. Branches downy. Fruit small, oval, purple flesh yellow. Freestone. August.

Diamond.

Foreign. Branches downy. Fruit large, oval, purplish black; flesh yellow, dry. Freestone. September.

Dana's Yellow Gage.

American. Branches downy. Fruit medium, oval, pale yellow; flesh yellowish. Clingstone. September.

Damson.

Common Damson. | Purple Damson,
Early Damson.

A variety common in all gardens, increased by seeds and suckers; many sub-varieties, under names of Winter Damson, Prune Damson, Sweet Damson, &c. Branches downy. Fruit small, oval, purplish blue; flesh greenish, partially free. September to November.

Early Yellow.

Jaune Hative. | Jaune de Catalogne,
Catalonian, | Prune de St. Barnabée,
White Primordian, | D'Avoine,
Amber Primordian, | Picket's July.

Foreign. Branches downy. Fruit small, oval, pale yellow; flesh yellow. Freestone. July.

Early Tours.

Précoce de Tours, | Violet Hative,
Early Violet, | Noire Hative,
Violet de Tours.

Foreign. Branches downy. Fruit medium, oval, deep purple; flesh greenish yellow, fibrous. Clingstone. Early August; poor bearer.

Field Marshal.

Corse's Field Marshal.

Canadian. Fruit medium, oval; flesh greenish yellow. Clingstone. August.

Fotheringham.

Sheen, | Grove House Purple.

Foreign. Branches smooth. Fruit medium, obovate, reddish purple; flesh greenish yellow. Freestone. August.

Guthrie's Apricot.

Guthrie's Apricot Plum.

Foreign. Branches downy. Fruit medium, oval, yellow, with crimson dots; flesh yellow. Clingstone. August.

General Hand.

American. Branches nearly smooth. Fruit large, roundish oval, yellow marbled; flesh pale yellow. Freestone. September.

German Prune.

Quetsche, | Leipsic,
Common Quetsche, | Sweet Prune,
True German Prune, | Damask,
Turkish Quetsche, | Quetsche Grosse,
Prune d'Allemagne.

A variety with numerous sub-varieties, the best of which is "Manning's Prune," previously described. Branches smooth. Fruit long oval, purple; flesh greenish. Freestone. September.

Ghiston's Early.

American. Branches smooth. Fruit large, oval, yellow; flesh yellow. Freestone. August.

Goliath.

Caledonian, | Steer's Emperor,
Saint Cloud, | Wilmot's Late Orleans.

Foreign. Branches downy. Fruit large, roundish oblong, purplish red; flesh yellow. Clingstone. August.

Gwalsh.

American. Branches smooth. Fruit large, obovate, dark purple; flesh yellow, acid. Clingstone. August.

Gifford's La Fayette.

American. Fruit medium, long oval, purplish blue; flesh yellowish. September.

Horse Plum.

Large Early Damson, | Sweet Damson.

American. Seedlings make good stocks for budding. Branches downy. Fruit medium, oval, reddish purple; flesh greenish yellow. Freestone. August.

Holland.

Blue Holland, | Holland Prune.

Foreign. Branches downy. Fruit medium, round, reddish purple; flesh yellowish. Freestone. September.

Judson.

American. Fruit small, roundish oval, reddish pink, mottled; flesh yellowish; stone large, free. August.

Large Green Drying.

Knight's Large Green Drying.

Foreign. Branches smooth. Fruit large, round, greenish yellow; flesh yellowish. Clingstone, insipid. September.

Lucombe's Nonsuch.

Foreign. Branches smooth. Fruit medium, roundish, yellowish green; flesh greenish. Clingstone. August.

Little Queen Claude.

Yellow Gage (*of the English,*) | Small Green Gage,
Petite Reine Claude, | Gonne's Green Gage,
Reine Claude Blanche, | White Gage.

Foreign. Branches smooth. Fruit small, round, yellowish green, with red spots; flesh pale yellow. Freestone. August.

Muscle.

Foreign. Only grown for stocks. Fruit oblong, dark red, large stone.

Nectarine.

Caledonian? | Howell's Large.

Foreign. Branches smooth. Fruit large, roundish, purple; flesh greenish yellow, partially clingstone. August.

Orleans.

Monsieur, | Old Orleans,
Monsieur Ordinaire, | Red Damask,
Italian Damask *of some.*

Foreign. Branches downy. Fruit medium, round, reddish purple; flesh yellowish. Freestone. August.

Penobscot.

American. Fruit large, oval, greenish yellow, little red in sun; flesh yellow. Clingstone. September.

Pond's Seedling.

Pond's Purple.

American. Branches downy. Fruit medium, roundish, purple; flesh yellowish. Freestone. August.

Peoly's Early Blue.

American. Branches downy. Fruit medium, oblong, dark blue; flesh yellow, partly free. August.

Queen Mother.

Red Queen Mother, | Pigeon's Heart,
Damas Violet.

Foreign. Branches smooth. Fruit small, round, purplish red in sun, amber in shade; flesh yellow. Freestone. September.

Red Egg.

Red Magnum Bonum, | Red Imperial *of some,*
Askew's Purple Egg, | Purple Magnum Bonum,
Purple Egg, | Florence.

Branches smooth. Long and extensively grown. It is far surpassed by many

others ripening at same time. Fruit large, oval, deep red, with gray dots; flesh greenish, coarse. Freestone. September.

Red Imperial.

Imperial Rouge, | Early Forcing.

Foreign. Branches slightly downy. Fruit large, oval, reddish violet; flesh greenish yellow. Freestone. September.

Red Perdrigon.

Perdrigon Rouge.

Foreign. Branches downy. Fruit medium, roundish oval, deep red, lilac bloom; flesh yellow. Freestone. August.

St. John's.

Prune de St. Jean.

Foreign. Branches downy. Fruit medium, purplish blue; flesh greenish yellow. August.

Semiana of Boston.

This has been thought to be the Impératrice Violette of old Duhamel. We are not prepared to say, and as it is condemned by all growers, do not think it worth looking after. Branches smooth. Fruit medium, oval, dark blue, flesh harsh, acid. Clingstone. September.

Suisse.

Simiana, | Swiss Plum,
Prune Suisse, | Monsieur Tardif,
Prune d'Altesse.

Foreign. Branches smooth. Fruit above medium, round, violet red; flesh greenish yellow, acid. Clingstone. September.

Siamese.

American. Branches smooth, Fruit grows in pairs, which is its only merit, pale yellow; flesh yellow. Clingstone. September.

Stabeler's Seedling.

American. Branches downy. Fruit medium, oval, greenish yellow, with white specks; flesh yellowish. Clingstone. August.

St. Catherine.

Foreign. Branches smooth, valued in France for drying, surpassed here by varieties of later origin. Fruit medium, obovate, pale yellow, little red in sun; flesh yellow. Clingstone. September.

Virgin.

Virginale.

Foreign. Branches smooth. Fruit medium, roundish, purple; flesh yellow. Freestone. September.

Wilde's.

American. Fruit large, oval oblong. greenish yellow ; flesh yellowish green. Clingstone. July.

White Damson.

Late Yellow Damson, White Prune Damson, | Shailer's White Damson, White Damascene.

Foreign. Branches smooth. Fruit small, oval, pale yellow, few red spots; flesh yellow. Clingstone. September.

White Imperatrice.

White Empress, | Impératrice Blanche.

Foreign. Branches smooth. Fruit medium, obovate, bright yellow, few red spots ; flesh yellow. Freestone. September.

White Perdrigon.

Perdrigon Blanc, | Maitre Claude, Brignole.

Foreign. Branches downy. Fruit medium, oval, greenish yellow, red spots in sun ; flesh pale yellow. Clingstone. August.

THE QUINCE.

Cydonia vulgaris, Dec. *Rosaceæ* of Botanists.

The Quince is a tree of crooked, tortuous, rambling branches, and in the usual neglected state in which it is cultivated, seldom reaches a height of over fifteen feet. In rich, deep soils, however, it will acquire a height of twenty-five to thirty feet. While young and in the nursery, it is of rather rapid growth; but after the trees commence fruiting, the growth is less rapid, and is more spreading than upright. The botanical name, *Cydonia*, is said to be from its first attracting notice in the city of Cydon, Candia. The largest tree on record is growing in the neighborhood of Geneva, New-York, and is, according to the "Horticulturist," thirty feet high, with a trunk girthing six feet, and branches extending over a circle seventy-five feet in circumference. In the Journal of the London Horticultural Society, a variety is spoken of as existing in Persia, of which the fruit acquires the weight of fifty to sixty ounces, and ripened, loses all its austerity, so that it is eaten at the dessert like a soft, ripe pear. No such variety has, however, yet found its way to our shores, and it is somewhat doubtful if it exists. The large, pale pink blossoms of the quince make it rather ornamental; and appearing, as they do, after other fruit trees have done blooming, it is almost certain to escape late frosts, and annually produce fruit. We have often wondered at the taste that cultivates carefully a bush of privet or snowberry, while the quince is neglected in some secluded, shaded corner.

Propagation.—*By Seed.*—The seed should be saved by cutting out the cores and seeds, and laying them in a heap for a few days, or until they become soft, when rubbing in water and passing the pulpy part through a sieve leaves the seeds clear. They should then be mixed with damp sand in shallow boxes, and placed in a cool cellar or outhouse until spring—care being taken that they do not get dry, nor yet wet enough to decay. In spring, sow thinly, in drills, good, rich, deep soil, and cover about two inches deep.

By Cuttings.—These are usually taken off in spring early, from wood of last year's growth, and are about one foot long each. The buds should all be cut out, except the two upper ones, and the cutting set erect ten inches deep, in rich, moist, sandy soil. If ground is available where moisture can be insured in summer, without overplus in winter, the month of September is best for

making and putting in the cuttings. Small beds may be made, well shaded from noonday sun, and watered during the summer season.

By Layers.—These are usually made in spring, by bending down and pegging, as described in a previous part of this work. They usually form roots the first season, and will answer the following spring to be cut from the parent plant and transplanted into nursery-rows.

By Roots.—Small pieces of the roots, from four to six inches long each, taken off in spring, and planted with the upper end about two inches under ground, will throw up fine shoots during the season. For propagating the *Cydonia Japonica*, or Japan Quince, this is decidedly the best way.

By Budding and Grafting.—The Portugal and Orange Quince, being the most valuable, are often propagated by budding and grafting; and when quince stocks for the purpose are not on hand, the common white thorn answers a very good purpose—often doing even better than the quince, in poor soils, or in the hands of those who neglect cultivation.

Soil.—The soil, for successful growth, should be rich, deep—say two feet—and regularly cultivated, or, in other words, free of grass or weeds. Barn-yard manure, with salt in abundance, mixed, and allowed to lie six months before being applied and spaded-in around the trees, will often render trees deemed unproductive, and of poor quality, productive, and of the best. New plantations, if to be made in old worn-out soils, should first have a liberal dressing of virgin-earth or leaf-mould from woods. Free use of liquid manures applied during winter and spring, have to our knowledge kept a plantation of the quince in fine health and bearing for upwards of thirty years. Bog-earth, or salt marsh-mud, is frequently used in the States bordering on the ocean or salt water.

Situation.—A shaded situation, and moist, has been almost universally advised; neither of which is at all essential. Shade, on the contrary, is objectionable; while, in soils well supplied with manures and salt, moisture sufficient will always be found.

Transplanting, Pruning, and Distance apart.—The Quince is hardy, and the fall is best for transplanting; but, when not convenient, its roots strike so readily that no one should be deterred, even if left until late in spring. Newly-planted trees should be pruned back very closely, or say two-thirds of the last year's growth cut

away, and all branches for a distance of eighteen inches from the crown cut away, thus leaving the tree with a stem or body of eighteen inches—just sufficient to enable one to dig and cultivate around it underneath the branches. The distance apart for trees destined for an orchard should be about twelve feet each way. The object of pruning orchard trees should be, to keep the head open and regular—cutting away all crossing limbs and suckers. "The bearing branches, or spurs of the quince, are small twiggy shoots, produced on wood at least two years old. These bear two, three, or more fruit-buds. These produce shoots two or three inches long, on the point of which the fruit is borne singly. These spurs have always wood-buds, as well as fruit-buds, and therefore should be shortened back the spring after they have borne, in order to produce new spurs at the same point."

INSECTS, ETC.—"The *borer* sometimes proves a formidable enemy. It is the larva of an insect which attacks the wood of the trunk, near the surface of the ground, and works inwards, usually upwards, but sometimes downwards, to a distance of several inches into the wood, during the summer season.

"As the borer frequently destroys the tree, various means of prevention have been resorted to. The remedies described for the apple-borer are found useful. When the insect has once obtained possession, the best method appears to be direct attack. Scrape the soil from the trunk, and cut with a knife lengthwise, and not across the bark and wood, till the insects are found. Repeat the operation once a week for several times, as a part escape the first examination. Then cover the wounded parts with a mixture of warm tar and ochre or brickdust. It is a great saving of labor to arrest early their progress; hence, trees should be examined frequently. They may sometimes be extracted by a flexible barbed wire, when cutting out would too much mutilate the tree."

In spring or early summer months the ends of the branches often turn black and die. By some, this is declared to be caused by an insect, (*scolytus*,) and the remedy said to lie in the cutting off and burning the branches. We do not so regard it, but believe it rather caused by atmospheric change; as a bright, clear, hot sun immediately opening at about midday, after a warm, softening rain, will often exhibit the result of blacking ends of young, tender shoots, in a very few hours.

USES.—The quince is never eaten in a raw state, but has, from the days of Columella, been highly esteemed for making of marmalade, preserving, stewing, to give additional flavor to tarts of apple and of pastry, etc. In medicine, the expressed juice, repeatedly taken in small quantities, is regarded as cooling, astringent, and

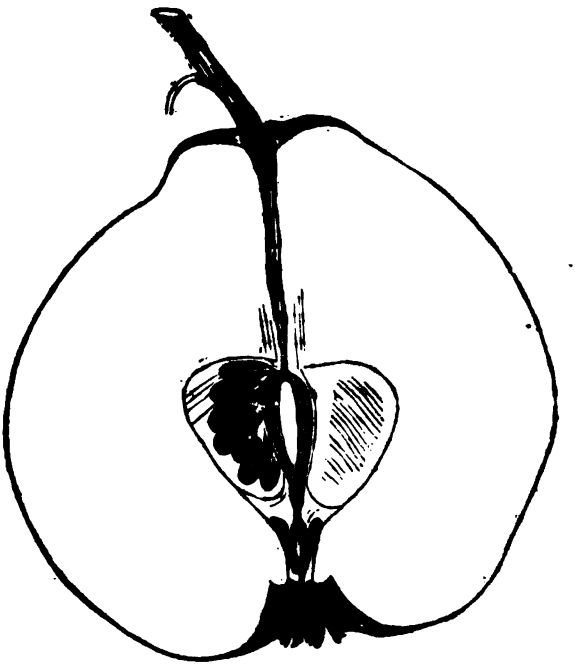
stomachic. Dried quinces are said to be excellent. Gathered carefully by hand, the quince may be wrapped in paper, and, placed in a cool room, kept until near midwinter.

VARIETIES.—Of these there are but three really worthy of description, and, of these, two only worthy cultivation to any extent. The Chinese Quince (*Cydonia Sinensis*) is cultivated only as ornamental. Its fruit is egg-shaped, dull green, with hard, dry flesh; its flowers rosy red, very pretty. The Japan Quince (*Cydonia Japonica*) is also only cultivated as an ornamental shrub. There are three varieties, bearing flowers bluish white, scarlet or crimson; and of the latter, with flowers nearly double. The fruit is dark green, hard, with a pleasant odor; not eatable.

ORANGE QUINCE.

Apple Quince.
Apple-shaped Quince,

Angers Quince.
Cydonia v. Malformis.

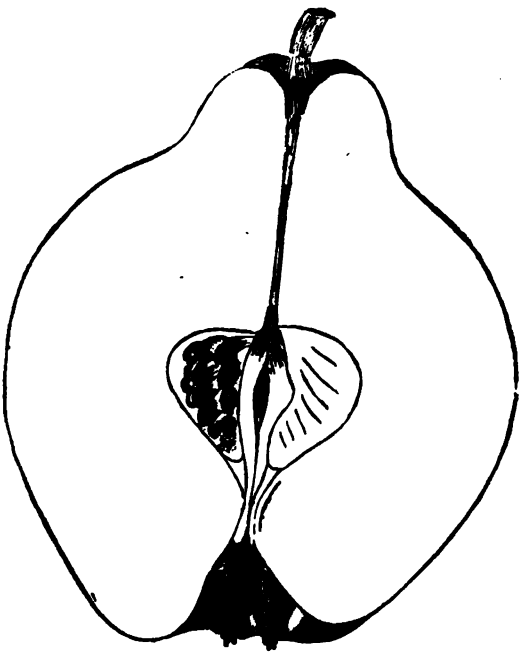


This is the variety most generally grown, and most esteemed. When fully ripe, its rich golden yellow resembles more the color of

an orange than its shape corresponds to the general form of apples; therefore we prefer the name orange to apple-shaped. It is not rare to find it grown from seed, and the seedlings sold as the Orange Quince, when, in truth, as many of the seedlings are likely to produce the pear-shaped or even far inferior fruit, as seedlings from a good pear or good apple, when the parent was grown by itself. It is often gathered before ripe, which is not until from the middle to last of October. If gathered too early, they do not cook tender. *Leaf*, ovate pointed; *fruit*, large, ovate, obtuse pyriform, varying to obovate conical; *stem*, usually in a slight depression. When well-grown and cared for, the *skin* is smooth, of a rich golden yellow. Without care, it becomes small, knotty, and woolly. *Core*, large, and placed nearest the blossom or calyx end; *seeds*, reddish brown.

PORTUGAL QUINCE.

Cydonia Lusitanica..



This variety is readily distinguished in the tree, by its leaf being round, or as wide as long, and very downy underneath. The true

variety is yet scarce in the West. It has the reputation of being a shy bearer, but trees in our grounds have produced equally as abundant as the Orange Quince. *Fruit*, medium to large, regular oblong pyriform, smooth, of a paler yellow than the Orange variety; *core*, medium, and placed near the centre; *seeds*, light brown; *flesh*, mild, less astringent than other varieties; cooks tender, and turns a fine purple or deep crimson, hence highly esteemed. It ripens about ten days earlier than the Orange Quince; requires very rich, deep soil.

Pear Quince.

Pear-shaped Quince, Oblong Quince, | Pyriform Quince, Cydonia Sub. v. Pyriform.

This takes its name from the fruit being shaped much like many varieties of the pear. It is of medium size, roundish oblong or pyriform, tapering to the stalk. *Skin*, dull yellow; *flesh*, firm, tough, dry, but of high flavor. When stewed or cooked, it is less tender, and the flesh less lively in color than the Orange Quince. *Leaves*, oblong ovate. *Season*, last of October.

New Upright.

Paris de Fontenay.

A variety first introduced to notice by Messrs. Ellwanger and Barry, of Rochester, N. Y. It grows upright, strikes readily from cuttings, but after the first year's growth seems to lose vigor and afterwards grows very tardily. It has not yet fruited.

THE RASPBERRY.

Rubus Idæus. *Rosaceæ* of Botanists.

A low deciduous shrub, found wild in the woods, both of this country and Europe. The roots being permanent and the stems biennial, they throw up a number of shoots, which produce fruit the second year and die. Our present cultivated varieties have been produced by high cultivation of seedlings from a variety no better than is to be found common in the fence corners of our slovenly farmers.

Propagation and Transplanting.—New varieties are produced from seed; the seedlings having a tendency to depart materially from the character of the parent, as in the instance of the "Orange," produced from seed of a crimson berry.

Seedlings are easily grown by planting the berry when fully ripe, about one inch deep, in light loamy soil, where it is a little shaded. They will fruit the second or third year. Varieties are usually increased by transplanting the suckers or offsets. They can be propagated by cuttings, which is done much in the manner of managing cuttings of the rose; the care and attention requisite, making it only desirable in case of rare or new kinds. A few varieties, as the American Black and English Red, sometimes propagate by their branches bending over until the ends touch and become covered in the ground.

In transplanting, the root should be protected from drying winds or hot suns, and the cane should be cut back one-fourth its previous season's growth.

The rows should be north and south, and three to four feet apart, according to the vigor of the sort, and the plants placed one every two feet. Some plant three in a hill, the hills four feet apart. We think they become matted too soon in this way.

Soil.—All cultivators agree, that while the raspberry may be made to grow on gravelly loam, slaty soil, or stiff cold clay, it can be relied on for a crop only when planted in a rich *deep* loam, where there is moisture, but such drainage that water will not stand. For those whose gardens are upon soils naturally unfavorable, deep trenching, placing coarse barn-yard manure at the bottom of the trench, and covering the surface with two inches of leaf-mould from the woods, will often render the plants productive, especially in wet seasons.

Situation. The situation should be open, fully exposed to light and air; to this end the advice to form rows north and south.

Culture and Training.—In large plantations the weeds are kept down mostly with the plough and cultivator, hoeing where the culti-

vator does not reach. Where the variety is hardy, a single pruning in the spring is all that is necessary. This should be done early in March or April, according to the season or section of the country where located; and consists in cutting away the canes of last year's bearing, leaving four to six of the strongest of last year's growth for the coming crop; these to be cut back one-fourth, cutting away all shoots of slender growth, and also all suckers unless wanted for future planting. Varieties requiring winter protection should have the old fruiting canes cut away in September. Where increase of plants is wanted, they should not be dug or hoed around early in spring.

An English gardener in our immediate neighborhood has practised the following modes of training ever since our residence in the north of Ohio:

Figure 9 represents the canes prepared for fruiting, in April. The uprights are posts made of cedar or locust, four inches square at the bottom, and two inches at top. The horizontal lines may be of tarred rope or annealed iron wire, coated with coal tar. To the horizontal wires the canes are tied by strips of bass bark, such as is used in budding.

Fig. 9.

In figure 10, the arched portion tied to the stake in the centre, represents the canes of last year's growth prepared for fruiting the coming season.

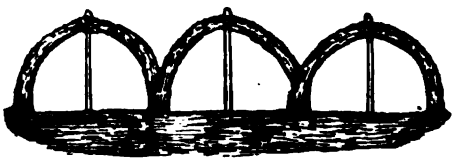


Fig. 10.

Figure 11 represents the plants in the fall; the upright canes being those of the season's growth, while the arched ones are those which have produced fruit and must be cut away.

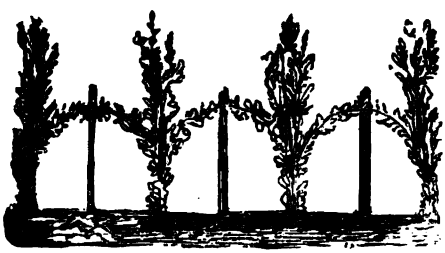


Fig. 11.

Insects. — The raspberry is generally free from destructive insects. Dr. Munson, of New Haven, Conn., in a paper to the American Pomological Society, speaks

as follows of one. We have not seen it West. "It is a fungus of a bright orange color, and infests the under side of the foliage of the common red raspberry, *Rubus Idæus*, in Connecticut; and the exhaustion occasioned by this fungus causes the plant to put up a multitude of spindling stalks, and renders it wholly unproductive. This affection disseminates itself, and I know of no remedy."

PROTECTION.—Many of the best varieties, like Red Antwerp, require protection in winter, north of Philadelphia, in order to insure a full crop. This is best and easiest done by two men passing along the rows, one bending down the canes to the ground, while the other with a shovel throws two inches of earth upon them.

GATHERING FRUIT.—This should be done in the cool of the morning, when they are higher flavored than at midday.

USES.—"The raspberry is held in general estimation, not only as one of the most refreshing and agreeable sub-acid fruits for the dessert, but it is employed by almost every family in making preserves, jams, ices, sauces, tarts, and jellies; and on a larger scale by confectioners, for making syrups; by distillers, for making raspberry brandy, vinegar, etc. Raspberry wine, made in the same way as that of currant, is considered the most fragrant and delicious of all home-made wines." (*Downing.*) Its fruit, immediately succeeding the strawberry, and not liable to undergo acetous fermentation in the stomach, is regarded and prescribed by many physicians as a promoter of health.

PROFITS.—Seldom failing to produce a crop when grown on suitable soil—requiring comparatively little labor to prune and keep the plant in order; always meeting ready sale at fair prices—it is surprising that more attention has not been given the culture of the raspberry by orchardists and farmers. The "Red Antwerp," which is mostly grown for the New-York market by cultivators on the Hudson river, is stated to have produced 3,300 baskets of one pint each, from three-fourths of an acre; and $1,500 has been realized in a single season from sale of product of three acres. A plantation of raspberries will be in perfection the third year, and continue profitable five or six years, when it is best to form a new one on a fresh piece of ground.

AUTUMN FRUITING.—Any variety may be caused to mature its fruit in the autumn, by cutting away all shoots in spring, and stopping in the young shoots about midsummer. It is, however, an unprofitable course, as the plant is unfitted for another season's fruiting, except in the same way, and the yield is only about one-half.

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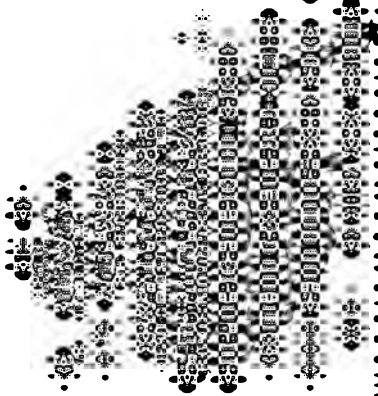

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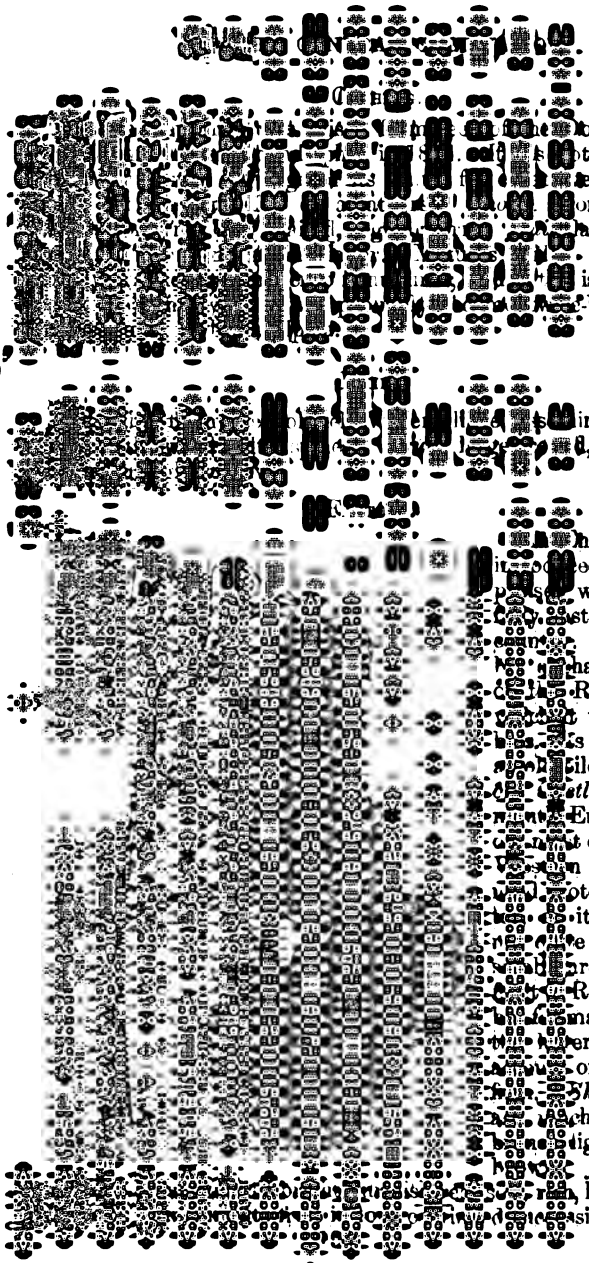

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Canes, moderately strong, yellowish green, becoming pale brown early in autumn, covered below with dark brown spines, but the upper portions, especially of the bearing wood, nearly smooth. Ripens from 1st to 10th July. The canes need protection in winter throughout northern sections, in order to secure a full crop.

Yellow Antwerp.

White Antwerp, | Double-bearing Yellow.

This variety is only suited to small gardens, and even there we presume will soon give place to the Col. Wilder and Orange. It sometimes throws up a succession of shoots, maturing fruit for a long time, whence its synonym of Double-bearing. *Shoots*, strong, light yellow, with greenish spines; *fruit*, large, conical, pale yellow, sweet, and excellent. Requires protection in winter. In our Southern States the Antwerp varieties are said to fail.

Walker.

Seedling grown by Dr. Brinckle, which promises to be valuable as a market variety. It is yet little known out of Philadelphia. *Fruit*, large, round, deep crimson, solid, adheres firmly to the stem, keeps long in perfection on the plant, and bears carriage well; *spines*, red.

CLASS III.—*Unworthy farther Culture.*

American Red.

Common Red, | English Red *of some.*

Well known. Shoots upright, light brown. Fruit medium, roundish, light red, sub-acid. Early.

American White.

White Thimbleberry.

Varying from above only in color.

Barnet.

Cornwall's Prolific, | Cornwall's Red,
Cornwall's Seedling, | Large Red,
Lord Exmouth's.

English. Shoots long, yellowish green, branching. Fruit large, soft, roundish conical, purplish red, agreeable.

conical, dull red.

medium, round,

along the stems.

late.

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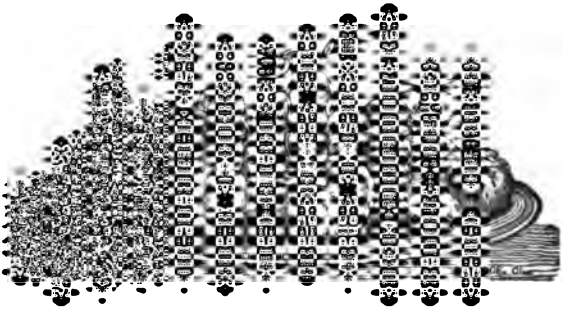


THE STRAWBERRY.

Fragaria, (*of species*,) L. *Rosaceæ* of Botanists.

During the past ten years, or since the advent of Hovey's Seedling to the varieties of the strawberry, there has arisen a furor for the production of new varieties, until nearly every village in the United States has its "rare and unsurpased seedling," cultivated and extolled with praise and poetry equalling that of olden bard; while savans wise on strawberry culture, and the structure of plants botanically, have occupied page after page of our Horticultural Journals, much to the amusement, if not instruction, of practical men.

A native of the temperate latitudes of both hemispheres, the varieties of the strawberry are universally esteemed among the most delicious as well as most wholesome of the smaller fruits. And although it is regarded as properly a habitant of cold climates, it is successfully cultivated in the most southern latitude of this country.

As a fruit embracing delicious and healthful qualities, with full and satisfactory pecuniary returns, it has found a place in every garden, farm, and plantation, from the size of a bed four feet square to the field of five times that many acres; yet withal, there is not sufficient quantity grown to meet the demand. Olden records have been made of cures effected in the human frame from use of strawberries. We consider the fact, that during strawberry season there is less of sickness in cities well supplied with that fruit, a most agreeable testimonial to its healthful and invaluable qualities at the present day. The distinctive name *Fragaria* is highly expressive of the fragrant scent emitted by the fruit.

Raising from Seed.—When the fruit is perfectly ripe, it should be gathered and cut into small pieces, or with great care each seed separated. Select ground of light sandy soil, where only the morning sun will shine; or, better, perhaps, have ready a cold frame with the lights sloping to the north. Sow the seed at distances of about one inch, and cover lightly by sifting fine sand, or, what is preferable, vegetable mould from the woods. This done in June, the plants will need care until about October, at which time, if not grown in a

frame, they should have tan-bark or decayed leaves strewed among them to the depth of two inches. Early in April following, transplant into deeply trenched ground, well manured with vegetable compost.

Propagation from Runners and Divisions.—All varieties of the strawberry, except the Wood and Alpine, propagate rapidly by means of runners. These, when a new variety is procured, should be carefully watched, and as fast as they make joints, should be pegged down, and have fine soil or sharp sand scattered over them to induce them more readily to make roots. In this way from fifty to one hundred new plants can be obtained from a single one in a season.

To secure a bed of those most prolific in old grounds, select while in fruit, and set stakes by side of those from which you wish to renew; after fruiting, destroy all around, thus giving them light and room to form abundance of new plants. The Wood and Alpine varieties are propagated easily from seed with but little variation. They are also propagated by dividing the roots or cluster of roots early in the spring.

Fertile and Barren Plants.—It is an old saying that "every person enjoys some hobby on which to ride." Mr. N. Longworth, of Cincinnati, has received the credit of starting the hobby of (in common phrase) male and female strawberry blossoms; and so vigorously has the hobby been ridden, that, with locomotive power and speed, it has found its way into every journal in the country, whether horticultural or otherwise; and so generally is the distinction of staminate (male) and pistillate (female) flowers understood, that we do not deem it necessary here to re-describe.

"The European Wood and Alpine strawberries always maintain a natural character of the blossom, no matter how cultivated, and therefore every blossom gives a perfect fruit."

Fig. 1.
Natural Stats

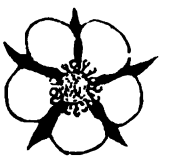


Fig. 2.
Sterile Staminate Blossom.

Fig. 3.
Sterile Pistillate Blossom.

The "Scarlets" and "Pines," as they are classed, when grown from seed in highly cultivated grounds, have a tendency to become imperfect in either stamens or pistils, as the case may be, and hence

arises the necessity as well as apparent reality of the terms male and female.

In the production of new varieties, even in our wildlings, the seedling plants, by means of highly enriched and stimulating soils, in exhibiting the full and even enlarged development of one organ, the other remaining imperfect, has given rise to the theory of strictly barren (staminate) and fertile (pistillate) plants, which when once formed, it is well known, seldom change. We coincide with Mr. Downing, that "the organs are always present, though imperfectly developed," and that when "deficient in pistils, (see Fig. 3,) they are called male plants; if deficient in stamens, (see Fig. 2,) female plants, the *terms* are *incorrect*;" yet these terms have become so commonly accepted that we have for the better understanding continued their use.

This deficiency in the one or other organ arising from the original state of cultivation, cannot be changed by placing the plant in different soil and preserving an even temperature. The runners will, when grown in open air and usual cultivation, in nine hundred and ninety-five instances out of every thousand, continue to maintain the habit of the parent plant. A change from imperfect or perfect construction in the flower of the strawberry cannot be depended on from a plant whose habit is once established, by means simply of varied cultivation, although very high and exciting cultivation from enriching of animal manures, will often produce over-luxuriance of foliage, with corresponding decrease of fruit stems; hence the necessity of forming beds or plantations of the two distinct fully developed plants, and also the care requisite to prevent the staminate or male plants from occupying too much ground, their supply of food derived from the root being given to creation of new plants by means of runners instead of fruit, as in the pistillate or female variety.

With this understanding, therefore, that varieties are continually being produced, in which one organ is most prominently developed, and measurably to the destruction of the whole as a fruit-bearing flower, it has become a requisite in planting to secure such proportion of fruit-bearing or pistillate plants with the fructifying or staminate varieties as to return the desired yield of fruit. The pistillates, being regarded as the female, are counted valuable in newly formed beds as of ten to one of staminates or males.

Varieties however exist, like the Large Early Scarlet, Burr's Old Seedling, and Longworth's Prolific, which have generally been classed as staminate or male plants, and yet produce abundance of fruit. These varieties possess both organs perfect, in proportion of about three out of five flowers, and we have therefore classed them as hermaphrodite.

VARIETIES AND THEIR CLASSIFICATION.—The varieties of this fruit

have within ten years past become so numerous as to be burdensome to the author who describes, as well as the amateur or nurseryman who grows, while for all practical and useful purposes, but very few are retained as desirable to cultivate where quantity of produce and character, or rather flavor in fruit is expected.

The character exhibited in varieties often marks their parentage, yet, as it is known that a plant can be fertilized by two or more varieties, it is sometimes difficult to select the distinct class, and writers are often not a little confused in endeavoring to place them.

Authors have classed the strawberry as SCARLETS, the original type being our wild strawberry; PINES, originating from Pine or Surinam strawberry; WOODS and ALPINES, from the common wood strawberry of Europe; HAUTBOIS, or *High wood*, from Bohemia; CHILI, from South America.

The SCARLETS are designated in their character by small flowers; long, thin, light green, sharply serrate leaves; acid or sub-acid fruit, of bright scarlet color, with seeds deeply imbedded.

The PINES are designated by large flowers; broad, dark green leaves; fruit of pineapple flavor, and generally soft in texture; seeds slightly imbedded.

The ALPINES and WOODS have small flowers, perfect in their organs; small, thin, light green leaves; fruit small, sweet, and separating freely from the calyx.

The HAUTBOIS have large, pale green leaves, on tall foot-stalks, the fruit-stalk tall and erect, the fruit of a dull red or purplish color.

The CHILI, designated by hairy, thick, obtusely serrate leaves, fruit pale red and insipid.

The GREEN strawberries have light green foliage, plaited fruit, solid flesh, so unworthy cultivation as rarely to be found in this country.

We have dropped the arrangement into classes in order, simply designating each in our descriptive text.

SOIL AND SITUATION.—Rich, deep, loamy, inclining to clayey soils are generally found to produce the largest berries as well as most in quantity; but a sharp sandy soil, well manured with compost of animal manure, bones, decayed weeds, old mortar, brick-dust or rubbish, has, to our knowledge, produced some crops equal to any recorded in the public journals. Deep the soil must be, say twenty inches, to insure the perfection of an entire crop. If only a moderately deep soil of six to eight inches, the first berries will fill and perfect, while the heat and drought so usual throughout the West and South-west in strawberry season, will cause too rapid exhaustion, and prevent the filling and perfecting of the remainder.

Trenches, three feet wide and two feet deep, with one foot of straw or leaves laid in the bottom, then filled up with good soil, well repays the labor in the extra crop produced.

Where beds have been long established and rendered rich by digging in liberally of barn-yard manure, it frequently happens that too much growth of foliage ensues, to the destruction of flowers or fruit stems. Where such is the case, application of one quart of gypsum (plaster of Paris) to every four feet square of ground, with two inches over the surface of leaf or vegetable mould from the woods or old pastures, will again bring in fruit. It also often occurs, that the staminates have become too numerous. These are easily detected, as they flower some four or five days earlier than the pistillates, and may then be drawn out.

The situation of a bed or plantation affects only the earlier or later maturity of a variety. A side hill sloping south-east, with springs of water gushing from several points near its summit, has enabled an acquaintance of ours to send to market the "Early Scarlet" strawberry some ten days or two weeks in advance of others who have the same variety on warm soils and open level exposures. Situations so selected that water can be supplied liberally throughout the fruiting season, will increase the product nearly one-third. Wet ground, where water stands after rains, or springy, cold soils, should never be selected.

Season for Transplanting and Preparation of Plants.—South of Philadelphia, the best season for forming new plantations is either the last of September, first of October, or in March. In latitudes north of this range it will generally be found best to transplant in April or early in May. July or August planting in either section will be found unprofitable, owing to the clear drying heat of our sun; while September or later planting in the northern range will require additional care, heavy mulching with tan-bark, saw-dust or the like; and even then, many of the plants will be drawn out by frosts of winter.

The plants when set should be trimmed of all but two leaves, the roots immersed in muddy water, and if possible a damp or rainy time selected for the work; and in order to have the bed profitable, one hermaphrodite should be planted to every eight pistillate plants.

Time of Ripening.—This varies according to latitude. In the latitude of Cincinnati, the season usually commences about the 25th May, continuing until the first of July, and for every degree of latitude a difference of ten days may be counted on, either earlier or later, as you go north or south.

The fruiting season may also be controlled at pleasure by means of cutting foliage and flowers, and liberal or restrained watering. If, for instance, a bed of Jenney's Seedling be taken of eight feet

square, the first two feet square shall be permitted to bloom and fruit at its usual time; the next two feet shall have only its first fruit-stems plucked when just about to bloom; the third shall have its entire foliage and fruit-stems cut close to the ground, and when the second fruit-stems appear, they are also to be picked as in the second plat; the fourth shall be treated as the third, but receive no moisture after the first cutting for a space of ten days or two weeks. The result will be a succession of fruit in order.

MODES OF CULTURE.—Different varieties require measurably different modes of culture in order to insure full and perfect fruit. That of cultivation in hills of about two feet apart, one plant to a hill, the runners regularly destroyed, is most successful with the Wood and Alpine varieties, and also returns the largest and most perfect berries with nearly all the Scarlets and Pines; but at the price of labor in this country, it is regarded as too expensive to compare favorably with the following modes in rows or strips, which have been successfully and largely practised in this country, and are thus described by A. J. Downing:

"*Culture in Rows.*—The rows should be two feet apart, and the plants of the large growing kinds two feet from each other in the rows; of the smaller growing kinds, from one foot to eighteen inches is sufficient. The runners must be kept down by cutting them off at least three times a year, and the ground maintained in good order by constant dressing. During the first year, a row of any small vegetables may be sown in the spaces between the rows. Every autumn, if the plants are not luxuriant, a light coat of manure should be dug in between the rows; but if they are very thrifty, it must be omitted, as it would cause them to run too much to leaf.

"A light top-dressing of leaves, or any good compost, applied late in the fall, greatly promotes the vigor of the plants, and secures the more tender kinds against the effects of an unusually cold winter. Before the fruit ripens, the ground between the rows should be covered with straw or new-mown grass, to keep it clean. A plantation in rows is generally in full perfection the third year, and must always be renewed after the fourth year."

Culture in Alternate Strips.—"Strike out the rows three feet apart with a line. Plant along each line, about a foot apart in the row. The plants will soon send out runners, and these runners should be allowed to take possession of every alternate strip of three feet, the other strip being kept bare by continually destroying all runners upon it, the whole patch being kept free of all weeds. The

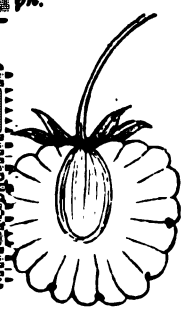
occupied strip or bed of runners will now give a heavy crop of strawberries, and the open strip of three will serve as an alley from which to gather fruit. After the crop is over, dig and prepare this alley or strip for the occupancy of the new runners for the next season's crop. The runners from the old strip will now speedily cover the new space allotted to them, and will perhaps require a partial thinning out to have them evenly distributed. As soon as this is the case, say about the middle of August, dig under the whole of the old plants with a light coat of manure. The surface may be then sown with turnips or spinach, which will come off before the next season of fruits.

"In this way the strips or beds occupied by the plants are reversed every season, and the same plot of ground may thus be continued in a productive state for many years."

Specific Nutrition.—R. G. Pardee, of Palmyra, N. Y., says: "I fertilize the plants, on opening of spring, with a liberal sprinkling of a solution of one-fourth of a pound each of sulphate of potassium, Glauber salts, and sal soda, and one ounce of muriate ammonia, to eight gallons of water; continue this once a week or ten days until they blossom; then pure cold water until they ripen."

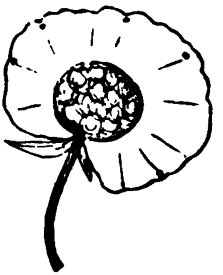
An old recipe published in the "Friends' Review," Philadelphia, says that "A bed 30 feet by 40 should have applied, about once a week, for three times, commencing when the green leaves first begin to start, and making the last application just before the plants are in full bloom, the following preparation: Of nitre, of potash, of Glauber's salt, and sal soda, each one pound; of nitrate of ammonia, one-quarter of a pound, dissolved in thirty gallons of rain or river water. One-third applied at a time, and the application made at evening." If dry weather, free application of clear soft water should be made between the times of using the preparation. Throughout most of the Western soils there is as yet no necessity for specific application of food to the strawberry, except it may be in old gardens. For field or market culture, new clover-ley will be found better than specific manures on old grounds. The applying specific nutrition in solution to all fruit-bearing plants, undoubtedly increases their susceptibility, while it increases the vigor, and foliage, and size of fruit; yet we doubt the success of such increased action in the soils of the Western States, as combined with the great changes of climate. On the other hand, we advise such course as will rather check than enhance vigor. We append analysis of the strawberry plant made by Mr. Bilius Kirtland for guidance of those whose grounds have become exhausted, and who prefer this method:

	Grains.
	6.117
	3.103
	1.515
	26.539
	8.908
	1.469
	6.970
	708
	33.154
	2.790
	23.008
	114.281
	1.739
	116.020



Longworth's Prolific.

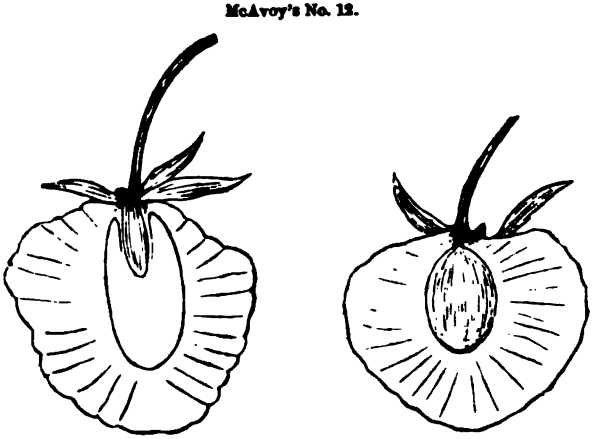
Schnecke's Seedling.



Originated at Cincinnati at same time as McAvoy's Superior, and on similar ground; both on the land of Mr. Longworth known as the "Garden of Eden." For market culture we regard it of more value than McAvoy's Superior. *Flowers*, hermaphrodite; *vines*, hardy; *foot-stalks*, long, stout; *leaf*, broad, round, bold, upright, with a curve; *trusses*, large, full, stand up well from the ground; productive, regular, and sure bearer. *Fruit*, above medium to large, generally regular, roundish, or obovate, sometimes slightly conical or coxcomb; *color*, rich, dark crimson; *seeds*, small, deeply imbedded; *flesh*, firm, bright red, with veins of white, and a white rim surrounding the core, which is obovate rounded, sub-acid, rich, high, not delicate flavor; *calyx*, around stem, is large, long acuminate, and the stem set deeply into the fruit. Ripens medium season, or with "Hudson."

McAvoy's Superior.

McAvoy's No. 12.



Originated at Cincinnati, in 1848, on loamy clay soil underlaid with limestone. Received the prize of $100 from the Cincinnati Horticultural Society, 1851. *Flowers*, pistillate: *vines*, hardy; *foliage*, broad, dark, wavy, and sharply serrated; *foot-stalks*, long: *trusses*, full and well formed; *fruit*, very large, exceeding by one-

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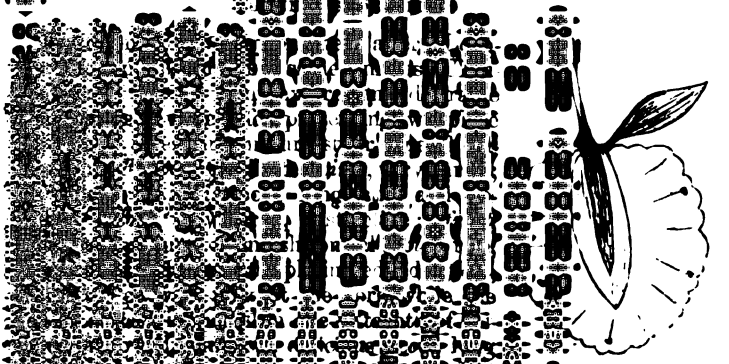
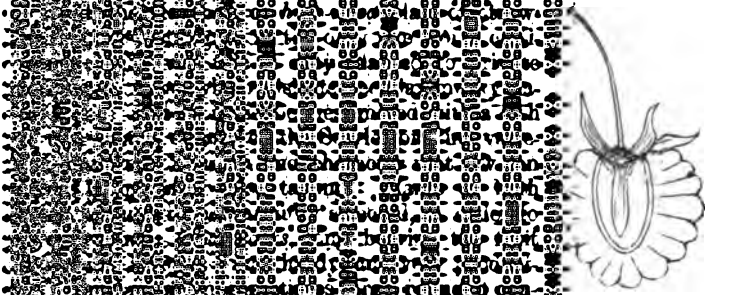
coarse in tex-
desirable for
lens. Ripens



gathered



t; *flesh*, firm,
nical, partially

hollow. Ripens with "Western Queen;" and sometimes, when the season is rainy, gives a partial second crop.

John Saul, Washington, D. C., says the Fertilized Hautbois of Myatt is a larger fruit and better bearer than above.

CLASS II.—*Worthy further Attention by Amateurs, and adapted to certain Localities.*

Alice Maude.

Princess Alice Maude.

English. Hermaphrodite; large flowers, conical, dark crimson, glossy, flavor sprightly, abundant bearer, grown largely in some sections of Virginia.

Ajax.

English. Staminate; globular, sometimes cock's comb, dark crimson, fine flavor. New.

Black Prince.

Black Imperial.

English. Pistillate; large, rounded, deep purplish red, glossy; seeds slightly imbedded, very showy; flesh rich, red, sweet; in some localities, as at Newburgh, N. Y., and on the Canada shore opposite Detroit, proves of the very highest flavor; wants a rich loamy clay; core full, firm, surrounded by a light pink line. There is another variety of Black Prince which is long, conical, somewhat acid.

Bishop's Orange.

Orange Hudson Bay, | Bishop's New.

Pistillate; medium, light orange scarlet, conical; fruits in clusters, moderately prolific; desirable in warm, deep, sandy soils.

Burr's Seedling.

Burr's Staminate Seedling, | Burr's Old Seedling.

American. Hermaphrodite; foliage light green, vines strong, vigorous and hardy. Fruit above medium, roundish oval, often conical; seed light-colored; color light pale red; flesh tender, mild and pleasant flavor, does not bear carriage well, and is of too pale color to sell well in market; productive, and as a fertilizer for pistillate varieties, valuable.

Boston Pine.

American. Staminate; requires high cultivation in hills; vines vigorous. Fruit large, roundish, slightly conical: seeds yellow, slightly imbed-

ded; color deep, rich shining red; flesh pale scarlet, firm, juicy, sweet, with a sprightly agreeable flavor. C. M. Hovey, the originator of this variety, claims for it earliness and great productiveness.

Brewer's Emperor.

English. Staminate; large, ovate, dark red, hardy, and said to be productive. Although introduced to this country some eight years, it has not as yet been much disseminated.

Brilliant.

American. Hermaphrodite; flowers large. Fruit large, conical, deep crimson, flavor excellent, productive, plants vigorous. W. R. P. in Hort.

Caleb Cope.

American. Pistillate; large, pointed, scarlet; flesh white, flavor good, prolific.

Crimson Cone.

Dutch Berry.

Pistillate; flowers medium. Fruit large, conical, good flavor, slightly acid; vines vigorous, requiring space, productive.

Cushing.

American. Hermaphrodite. Fruit large, color light scarlet, form obtuse conical; flesh fine, flavor sprightly, agreeable, productive. Originated by Dr. W. D. Brinckle, of Philadelphia.

Cleveland.

American. Hermaphrodite; leaf large, ovate rounded, dark green. Fruit large, varying from cock's comb to conical shape, irregular; color dark purplish red on sunny side, opposite a rich clear vermilion; seeds ovate pointed, prominent; flesh firm, of pineapple flavor, rich and delicious. A variety raised from seed in 1849, by Mrs. D. H. Lamb, of Cleveland, Ohio.

Crescent Seedling.

A variety originated at New Orleans, said to be perpetual bearer. We have been unable to examine it. It requires further testing.

Charlotte.

American. Pistillate; flowers medium, foliage broad. Fruit large, obovate; color dark scarlet; flesh sweet, sprightly flavor, productive. W. R. P. in Hort.

Climax.

Climax Scarlet.

American. Pistillate. Fruit medium, conical, slightly necked, light scarlet, rather acid, very productive. E. & B.

Cornucopia.

American. Pistillate. Fruit large, conical, scarlet, productive. W. R. P. in Hort.

Dundee.

Scotch. Pistillate; leaves light green, foot and fruit-stalks long, supporting the clusters of fruit clear of the ground. Fruit medium to large, roundish oval, very uniform, light pale clear scarlet; flesh firm, rich, acid, high flavor; very productive, extremely valuable as market berry, its period of ripening being from five to ten days after Willey or Hudson. Vines very hardy.

Duchesse de Trevise.

A variety which as yet we do not know of having been fruited in this country. Mr. R. Thompson, of the London Horticultural Society, thus describes it: Presented to the Society by M. Jamin, Bourg-la-Reine, near Paris, September 6, 1851. Fruit middle-sized, ovate, deep red; seeds small, rather deeply embedded; flesh pale red, juicy, with a brisk rich flavor; leaves large, roundish, widely and rather obtusely serrated; leaf-stalks moderately tall, very hairy, the hairs on these spreading horizontally, but those on the scapes and runners are adpressed. Appears to be a good bearer.

Duke of Kent.

Duke of Kent's Scarlet, | Austrian Scarlet,
Early Prolific Scarlet.

English. Staminate. Fruit small, roundish, conical, bright scarlet, sharp, rather acid flavor, valuable only on account of its early period of ripening; vines hardy.

Duncan's Seedling.

English. New. Fruit large, dark rich red, fine flavor, productive. Lately introduced.

Eberlein's Seedling.

American. Hermaphrodite; vines vigorous; flowers medium. Fruit medium, conical compressed; seeds light-colored, prominent; color dark scarlet, good, slightly acid flavor. Early, moderately productive.

Genesee.

American. Hermaphrodite; vines luxuriant; fruit-stalks stout, supporting the fruit well. Fruit large, roundish, dark crimson, very productive. Ripens late.

Green Strawberry.

Green Pine, | Green Wood,
Green Alpine.

Cultivated only by the curious. Small, roundish, whitish green.

Hovey's Seedling.

American Pistillate. Flowers small; vines vigorous; leaves broad, roundish, distinct from all other varieties; leaf and fruit-stalks short and stout. Fruit very large, roundish ovate, slightly conical, with a short neck; color, when fully exposed to the sun, dark rich shining red; seeds dark; flesh scarlet, firm, bears carriage well, but is deficient in richness of flavor. In rich, deep, loamy soils, and supplied with a good impregnator, this variety will give immense crops of large fine fruit. In common or sandy soils it perfects only a few large berries. We think "McAvoy's Superior" will entirely supersede it. The "Methven Scarlet" has been largely disseminated in Illinois and farther west States as Hovey's Seedling. Newly planted beds require a covering of litter in winter.

Hudson.

Hudson's Bay, | Late Scarlet,
Old Hudson, | American Scarlet.

Pistillate. More extensively cultivated than any other variety: its hardihood and late period of maturity, together with its fine rich acid flavor, so valuable for preserving, will continue for years to bring it abundant in the markets of our large cities. In the rich clay lands around Cincinnati it grows to such size as frequently to have been mistaken for Hovey's. It must, however, gradually give place to such varieties as Longworth's Prolific, Western Queen, &c. Fruit above medium, ovate, often with a neck; seeds deeply imbedded; color rich dark glossy red; flesh firm, of a high, brisk, acid flavor. Should be permitted to hang until fully matured. Season rather late.

Hooper's Seedling.

English. Staminate. Fruit medium, conical, dark rich red, good flavor, productive. Late.

Iowa Male.

American. Staminate. Fruit medium, round conical; seeds deeply imbedded; color pale red; core ovate conical, marked with a greenish line; flesh yellow; flavor delicate; moderate bearer.

Jenny Lind.

Staminate. Size rather large; form conical, perfect, generally with short neck; seeds moderately sunk in oval cavities; color bright light scarlet; flesh white, nearly solid, heavy, tender and juicy flavor, pleasant sub-acid, and under favorable circumstances highly perfumed. Early, ripening with the Early Virginia, but more prolific. Quality "very good." (Wilder, MS.)

Large Early Scarlet.

Early Virginia.

American. Hermaphrodite. In the Eastern States this is regarded as the best early berry. West, it has never sustained such character. Its chief value may be found as an impregnator of pistillate kinds. Fruit medium, roundish ovate, bright scarlet; seeds deeply imbedded; flesh tender, rich, slightly acid flavor. Season, very early.

Methven Scarlet.

Methven Castle,	Keen's Seedling (of some West,)
Methven,	Hovey's do. " "
Southampton Scarlet,	Stoddart's do. " "

Scotch. Pistillate. Strong grower. Fruit large, roundish or cock's-comb-shaped; seed slightly imbedded; color dull scarlet; flesh coarse, open texture; core large and hollow; flavor very indifferent. It sometimes produces large crops, ripening some four or five days after the height of strawberry season.

Montevideo Pine.

American. Hermaphrodite. Foliage large and vigorous; flowers very large; fruit large, conical, of a pine-apple flavor, ripening late. (W. R. P. in Hort.)

Monroe Scarlet.

American. Pistillate. Large, roundish, light scarlet, good, very prolific. (E. and B.)

McAvoy's No. 1.

McAVOY'S EXTRA RED.

American. Pistillate. Two varieties originated at same time and place as "McAvoy's Superior." They are yet comparatively untested, but with exception of quality, the same description will answer for both; large, roundish, scarlet; seed deeply imbedded; flesh stained with red; flavor agreeable, the extra red, sub-acid.

Moyamensing.

American. Pistillate. Foliage large, crenate serratures. Fruit large, roundish conical, deep crimson; seed crimson, set in rather deep depressions, with rounded intervals; flesh red, flavor very fine. (Trans. Penn. Hort. So.)

Magnifique.

American. Pistillate. Very large, rounded, orange scarlet, pleasant flavor, productive. (W. R. P. in Hort.)

Necked Pine.

Unique Prairie, | Pine Apple.

American. Pistillate. Fruit medium, conical, always necked, light scarlet; flesh white, delicate, a little acid, pleasant when fully ripe; little grown except in private gardens at Cincinnati.

Primordian.

American. Pistillate. Flowers small. Fruit large, conical, deep scarlet; productive. (W. R. P. in Hort.)

Prolific Hudson.

American. Pistillate. Fruit medium, short cone, crimson, good flavor, ripens gradually. (W. R. P. in Hort.)

Pennsylvania.

American. Pistillate. Leaf large, deep green. Fruit large, broadly conical, dark crimson; seed crimson, when shaded, yellow, slightly imbedded; flesh red; flavor fine. (Trans. Penn. Hort. So.)

Prolific Swainstone.

American. Hermaphrodite. Fruit large, ovate, scarlet; flavor fine; productive. (W. R. P. in Hort.)

Primate.

American. Hermaphrodite. Fruit large, conical, deep scarlet; productive, fine for market. (W. R. P. in Hort.)

Refulgent.

American. Pistillate. Medium, ovate with a neck, scarlet, fine flavor; productive. (W. R. P. in Hort.)

Ruby.

English. Fruit medium, oval, ruby red, fine flavor, prolific. (Hov. Mag.)

Rival Hudson.

Burr's Rival Hudson.

American. Pistillate. Fruit large, bright scarlet; flesh red, firm, subacid, very productive. Originated same time as "Burr's New Pine," and is much like "Hudson," its parent.

Red Alpine.

Stafford's Washington Alpine, | Newland's Mammoth.

Flowers perfect. Fruit small, conical, bright scarlet, delicate, peculiar flavor. Its principal value in our climate is the ripening gradually a long time. An autumnal crop may be procured by destroying the early blossoms. The "White Alpine" varies only in the color of its fruit.

Richardson's Late.

American. Hermaphrodite. Fruit large, roundish, short neck, light

scarlet, rich, sub-acid, sprightly flavor, moderately productive, ripens in succession until about middle of July. ("M. P. W., in Hort.")

Ross Phœnix.

American. Staminate. Fruit large, roundish compressed, dark red; flesh firm, good flavor; generally a poor bearer

Southborough.

Southborough Seedling, | Marshall's Seedling.

English. Pistillate. Fruit medium, ovate, conical, sometimes pointed, rich deep scarlet; seeds small, deeply imbedded, mild rich flavor, firm flesh, bearing carriage well. We have fruited this several years in connection with "Large Early Scarlet," (to which it is a good mate,) and found it more productive, and ripening equally early in season. Vines hardy; fruit and foot-stalks short.

Swainstone Seedling.

English. Staminate. Fruit large ovate, light crimson, firm fleshed, rich, delicious flavor. Ripens a long time, but is an uncertain bearer.

Salter's Versaillaise.

English. New. Not yet, we think, here introduced. We copy description of Mr. R. Thompson, of London Hort. Society:

Presented to the Society by Mr. John Salter, Nurseryman, Hammersmith, Oct. 24, 1851. Fruit large, ovate, sometimes flattened or cock's-comb-shaped, dark red; seeds rather deeply embedded; flesh pale, juicy, and rich; leaves middle-sized, roundish oval, widely serrated; leaf-stalks, scapes and runners hairy, the hairs spreading almost horizontally. A good bearer.

Orange Prolific.

American. Hermaphrodite. Fruit large, orange scarlet, acid, productive, late. (E. & B.)

White Alpine.

Varies from Red Alpine only in the color of its fruit.

Victoria.

Hermaphrodite, sometimes pistillate. Fruit medium to large, round, conical, rich scarlet; flesh firm, rich, high, slightly acid flavor. Season with Hudson and Willey. Some six years since we received this variety, but have never been able to find it described, or to recognise it as any variety under different name. The vines are hardy and usually prolific.

Willey.

Wiley.

American. Pistillate. Undoubtedly a seedling from Hudson, as plants taken from the bed of Mrs. Willey, originally Hudson, (from whence its

name,) have some been recognized as Hudson, while others bear the character allied to, but yet varied. Fruit medium to large, ovate, conical, rounded, rarely inclining to neck, rich, dark, glossy red; flesh firm, juicy, high acid flavor. Hangs long, and should be permitted so to do; vines very hardy, vigorous, require severe thinning, or the fruit is materially lessened in size.

Unique Scarlet.

American. Hermaphrodite. Large, light scarlet, sweet, rich, delicious flavor, moderate bearer.

White Bush Alpine.

This and Red Bush Alpine differ from the Alpine previously described, only in not forming runners; but, growing in neat, compact bunches, are used by many persons for edging beds in kitchen gardens. Bearing throughout the entire season renders it desirable. They are propagated by dividing the roots early in spring. Andrew Parmentier, of Brooklyn, N. Y., first introduced the Bush Alpines to this country.

Walker's Seedling.

American. Staminate. Fruit medium size, roundish conical, very dark crimson; seed moderately sunk; flesh not quite solid, deeply stained with red, sprightly rich flavor, of quality "best," prolific for a staminate. Wilder, MS.

CLASS III.—*Unworthy further Cultivation.*

Aberdeen Bee Hive.

English. Staminate; below medium, scarlet.

Bain's Extra Early.

Medium to small, round conical; flesh tinged with red, sweet and pleasant.

Buist's Prize.

American. Hermaphrodite; large, firm, moderately productive.

British Queen.

Myatt's British Queen.

English. Staminate; large, roundish, scarlet, rich, poor bearer

Bostock.

Rostock.

English. Roundish, poor bearer.

Cole's Prolific

English. Large, conical, good flavor.

Cole's Late Scarlet.

English. Medium, deep color, moderate bearer.

Cox's Seedling.

English. Large, light red, irregular shape, acid.

Columbus.

American. Pistillate, large, dark red, sweet, too tender.

Crimson Pine.

Hermaphrodite. Resembles Hudson.

Downton.

Knight's Seedling.

English. Staminate; large, irregular form, purplish scarlet, unproductive.

Deptford Pine.

Myatt's Deptford Pine.

English. Staminate; large, long conical, rich, scarlet, poor bearer, partially hardy.

Elton.

Elton Pine.

English. Staminate; large, light red, ovate, acid, tender, unproductive.

Giant Alpine.

Medium, globular, tasteless.

Goliath.

German. Medium to large, scarlet, irregular, acid, vinous. There is also an English variety, no better.

Grove End Scarlet.

Atkinson's Scarlet.

English. Hermaphrodite; medium to small, globular, light vermilion, acid, early, productive.

Globe Hautbois.

English. Small, globular, unproductive.

Huntsman's.

American. Pistillate; large, productive, flavorless. Huntsman's Staminate, medium, dark scarlet, good flavor, poor bearer.

Keene's Seedling.

English. Staminate; large, round cock's comb, purplish crimson, firm, rich,

ngh flavor, tender, unproductive. There is also a pistillate Keene's Seedling, received by N. Longworth, of Cincinnati, equally unproductive.

La Liegoise.

French. Staminate; medium, bright scarlet, unproductive.

Late Prolific.

American. Pistillate; medium, light pale scarlet.

Lizzie Randolph.

American. Pistillate; medium, scarlet, indifferent grower.

Myatt's Eliza.

English. Staminate; large, irregular cock's comb, tender flesh, hollow core, high flavor, poor bearer.

Mottier's Seedling.

American. Pistillate; resembles its parent "Hudson."

Melon.

Scotch. Medium, roundish, dark color, dwarf.

Myatt's Eleanor.

English. Staminate; large, long conical, crimson scarlet, acid.

Myatt's Globe.

English. Large, roundish, fine flavor, tender.

Myatt's Mammoth.

English. Staminate; large, irregular roundish, dark crimson, flavorless, poor bearer.

Myatt's Prince Albert.

English. Medium, conical, purplish crimson.

Myatt's Pine.

English. Large, bright scarlet, fine flavor, poor bearer.

Myatt's Prolific.

English. Staminate; medium, conical, light scarlet, good flavor, *not* prolific.

Ohio Mammoth.

American. Staminate; large, light pale red, conical, hollow core, deficient in flavor, poor bearer.

Old Pine, or Carolina.

Bath Scarlet, | Old Scarlet Pine,
Pineapple.

American. Staminate; medium, conical with a neck, bright scarlet, rich flavor, ripens when there are many better varieties.

Profuse Scarlet.

American. Pistillate; from seed of Large Early Scarlet, which it resembles

Profusion.

American. Pistillate; small, rich, sweet, productive.

Prince of Orleans.

Staminate; medium, delicate flavor.

Roseberry.

English. Staminate; medium, conical, good flavor, poor bearer.

Red Wood.

English Red Wood

The wild strawberry of Europe, easy of cultivation, bears freely and of long continuance; small, red, roundish ovate, sweet and delicate. The White Wood varies only in color.

Richardson's Early.

American. Pistillate; medium, dark crimson, acid.

Scioto.

American. Pistillate; large, light pale scarlet.

Scarlet Melting.

American. Pistillate; ovate conical, necked, light pale red; flesh tender, juicy, good.

Taylor's Seedling.

American. Pistillate; medium, long oval, neck distinct, light scarlet, sweet and agreeable, hollow core, unproductive.

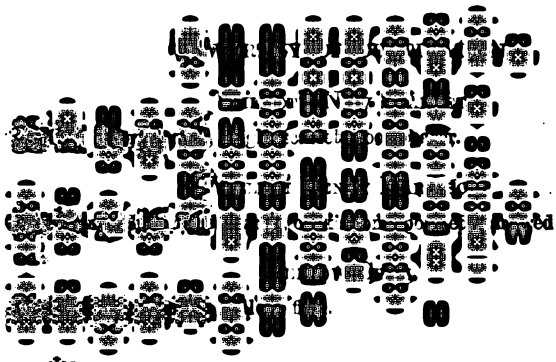
True Chili.

Patagonian, | Greenwell's New Giant,
Greenwell's French.

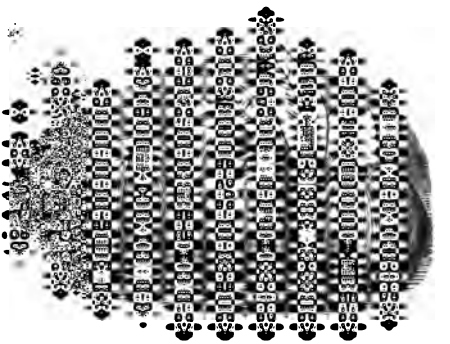
This, with the two following, are little valued, and rarely grown. Fruit large, conical, dull red, firm, hollow core.

Wilmot's Superb.

English. Large, round, cock's comb, scarlet, poor bearer.



ed ; flesh reddish.



APPENDIX.

Since the manuscript of the foregoing pages was placed in hands of the printer, there have been several new fruits introduced and described, in the Horticultural Journals and Societies' Transactions; these we have thought best to add in an appendix. There have also been some few omissions, consequent on the author not being at hand to correct the proofs until they were stereotyped; these also we have thought best to insert here.

APPLES.

CLASS I. *Worthy General Cultivation.*

Cogswell.

Cogswell's Pearmain

American. Native of Connecticut. It has been grown in Mass. and Ohio, and succeeds equally as well as in its native locality. Trees, moderately vigorous, making rather long annual shoots, of a dark, reddish brown color.

Fruit, large; *form*, roundish flattened; *color*, deep yellow, nearly covered with stripes, splashes, and dots of rich red, and a few large russet specks; *stem*, short, slender; *cavity*, open; *calyx*, medium, nearly closed; *basin*, shallow; *flesh*, yellowish, crisp, sprightly sub-acid; *core*, small; *seeds*, medium size, dark brown. *Season*, January to March.

Maiden's Blush.

American. Tree a rapid grower, forming a fine spreading head; succeeds, so far as producing annually and abundantly, in all soils; much the best, however, in those termed "limestone clay." Valued for cooking, for drying, and salable in market on account of its handsome appearance.

Fruit, medium to large; *form*, roundish, flattened; *color*, clear lemon yellow, with red cheek, varying from faint blush to rich crimson; *stem*, short; *calyx*, closed; *basin*, medium, abrupt; *core*, medium; *flesh*, white, fine-grained, tender, sprightly, rather sharp sub-acid unless fully ripened. *Season*, September and October.

CLASS II. *New and untested, adapted to Amateur Culture, or certain Localities.*

Berry.

American. Fruit large, roundish oblate, striped and mottled with crimson on greenish yellow; green russet spots. October, November.

Buel's Favorite.

Spotted Pippin, | Gray Pippin.

Fruit medium, roundish, greenish yellow, stem slender, cavity deep, russeted, calyx medium, flesh a little tough. November.

Callasaga.

American. Fruit above medium, roundish, dull brown on greenish yellow russet; calyx large, wide furrowed basin. October, November.

Camac's Sweet.

American. Fruit below medium, roundish conical, whitish green, clouded with green russet; calyx large, closed.

Cranberry.

American. Fruit medium, roundish conical, red, striped with carmine, gray russet dots; stem in a narrow, russeted cavity; calyx small, closed.

Dapper.

American. Fruit small, roundish, yellow, clouded with dull green, and specked with crimson in sun; calyx small, closed.

Mountain Sprout.

American. Fruit medium, oblong truncate, red striped, numerous white dots.

Nickejack.

American. From North Carolina. Fruit large, oblate, red striped and mottled on greenish yellow; cavity deep, russeted; calyx large, partially open; core small; seed light brown; flesh tender, juicy, delicate, "*best.*" Well adapted to the Southern States, not yet tested at the North.

Ritter.

American. From Berks county, Pa. Fruit medium, roundish oblong, shades of red striped, white dots; stem short; cavity deep, narrow; seed short, plump; flesh tender "*very good.*" October, November.

Summerour.

American. Fruit large, roundish, red mottled and striped, large gray dots; cavity deep; calyx large. October, November.

The ten foregoing descriptions of apples we take from the Ad Interim Reports of Pa. Hort. Society.

Sturmer Pippin.

Foreign. Tree healthy, good bearer; fruit rather small, roundish conical, yellowish green with brown, dull red in sun; flesh firm, crisp, juicy, acid; keeps well. January to June.

GRAPES.

New and untested, suited to Amateur Culture.

Brinckle.

Raabe's No. 1.

First fruited in 1850. *Bunch* large, rather compact, sometimes shouldered; *berry* five-eighths of an inch in diameter, round, black; *flesh*, solid, not pulpy; *flavor*, rich, vinous, and saccharine; *quality*, "best." (*Ad. Int. Rept.*)

Cassady.

An accidental seedling white grape, with native leaf, and dark purplish wood. *Bunch*, of medium size, tolerably compact, and sometimes shouldered; *berry*, below medium, five-eighths of an inch in diameter; *form*, round; *color*, greenish white with occasionally a faint salmon tint, and thickly covered with white bloom; *flesh*, juicy, with but little pulp; *flavor*, pleasant; *quality*, "very good." (*Ad. Int. Rept.*)

Clara.

Raabe's No. 4.

Bunch, medium; not compact; *berry*, medium; round, green, faintly tinged with salmon when exposed to the sun; *flesh*, tender, juicy; *flavor*, rich, sweet, and delicious; *quality*, "best." Fruited the present season for the first time. (*Ad. Int. Rept.*)

Concord.

Native of Concord, Mass., and stated in Hov. Mag. to be very early in its season of ripening, and possessing the aroma of the Catawba.

Emily.

Raabe's No. 2.

Bunch, large, not very compact, occasionally shouldered; *berry*, below medium, from three-eighths to one-half of an inch in diameter, round, pale red; *flesh*, very juicy, with little or no pulp; *flavor*, saccharine and delicious; *quality*, "best," for an out-door grape. Fruited in 1850 for the first time.

Graham.

An accidental seedling raised by Mr. Graham. It sprung up in 1845, and fruited in 1850 for the first time. *Bunch*, of medium size, shouldered, not compact; *berry*, half an inch in diameter, round, purple, thickly covered with a blue bloom, contains little or no pulp, and abounds in a saccharine juice of agreeable flavor; *quality*, "best." The leaf indicates its native parentage. It is probably a natural cross between the Bland and Elsinborough, both of which were in bearing in the garden where it orginated. (*Ad. Int. Rept.*)

Raabe.

Raabe's No. 3.

Bunch, small, compact, rarely shouldered; *berry*, below medium, round, dark red, thickly covered with bloom; *flesh*, very juicy, with scarcely any pulp; *flavor*, saccharine, with a good deal of the Catawba aroma; *quality*, "best." (*Ad. Int. Rept.*)

PEACHES.

CLASS II. *New and untested; suited to Amateur Culture, or certain Localities.*

Gorgas.

American. Native of Philadelphia; originated with Benjamin Gulliss from a stone of Morris White. Leaves serrate. Fruit large, roundish, with a slight prominence at the apex; dull greenish white, clouded and blotched with red on the exposed side; cavity wide, rather deep; stone free; flesh whitish, slightly stained at the stone, juicy; flavor saccharine and exceedingly luscious; quality "best." Middle to end of September.

Jane.

Baxter's Seedling No. 1.

Origin, Philadelphia, Pa. Fruit large, ten and one-half inches in circumference, roundish oblate, greenish yellowish white, with a red cheek; free; flavor delicious; quality "very good" to "best." (*Ad. Int. Rept.*)

PEARS.

CLASS II. *New and untested. Suited to Amateur Culture, or certain Localities.*

DOWNING.

Doyenné Downing.

Foreign. New, recently described and dedicated by M. Leroy (France) to the memory of the unfortunate Downing.

Fruit medium, roundish, irregular; green yellowish, speckled with russet dots; stem short, obliquely inserted; flesh white, crisp, juicy, sugary, lightly acidulated. Season, September.

BARRY.

Foreign. New. Fruit medium size, sometimes large, pyriform, irregularly shaped; skin rough red, spotted on the sunny side, yellow greenish on the opposite; calyx small, set in a narrow basin; stalk obliquely inserted; flesh white, coarse, tender at the centre, very juicy, sugared and perfumed. Season, October.

HOVEY.

Foreign. New. Fruit medium size, pyriform, regular, resembles the Beurré Capiaumont, skin fair, smooth, yellow, speckled and dotted around the eye; calyx set outside; stem obliquely inserted; flesh yellow, melting, juicy, sugary, perfumed and vinous. Season, September.

GENERAL TAYLOR.

Native of Maryland. The tree supposed to be the original one grows near Baltimore, and is 25 or 30 years old.

Size, under medium; form turbinate, obscurely pyriform, broad at the crown; color cinnamon russet, becoming fawn on the exposed side; stem inserted into a very small cavity; calyx partially closed, set in a broad, not very deep, furrowed basin; core medium; seed dark brown, ovate, no angle at the obtuse end; flesh yellowish white, granular, becoming buttery and melting, but somewhat gritty at the core; flavor as high as the Seckel, aroma delicious; quality "best;" maturity, November. (*Ad. Int. Rept.*)

REGNIER.

This is a variety claimed through the Pennsylvania Hort. Society to have been grown from seed of the White Doyenné; under that name it has repeatedly received premiums there: hence, not having seen the fruit, we conclude our description will answer for both. The growth of tree is stated as its distinctive character; being "more erect, full and rounded in its top."

GLOSSARY

Of the more Common Terms used in Fruit Culture.

Acute, sharp or angular.
Acuminate, drawn out to a point.
Alburnum, the sap-wood, as distinguished from the heart-wood.
Apex, point; the part of a fruit farthest from the foot-stalk.
Base, lower end, or that portion of a fruit, stalk, or part of a plant, nearest the supporting part or root.
Basin, the hollow or depression at the apex or crown of a fruit, surrounding the calyx.
Bezi, a wilding, or natural seedling.
Beurré, a buttery pear.
Border, artificial bed of enriched earth.
Callus, ring or swollen portion formed at the base of a cutting, by the descending cambium.
Calville-shaped, much ribbed, as applied to apples.
Calyx, the outer or green leaves of a flower, which, remaining on the apex of a pear or apple, are often denominated the eye.
Cambium, the soft, newly formed wood beneath the bark.
Canes, long bearing shoots; applied to grapes and raspberries.
Clipping, trimming down to some definite shape.
Colmar-shaped, pyriform or pear-shaped, with a rather slender neck and large body.
Conical, tapering regularly towards the apex.
Cordate, heart-shaped.
Coxcomb, applied to the form of strawberries when much compressed at the sides.
Crenate, notched or cut like rounded or blunt saw-teeth.
Crown, the part of a fruit farthest from the foot-stalk or base.
Dwarfs, trees made diminutive by grafting or budding upon stocks of small growth.
Espalier, a tree trained flat upon a trellis.
En quenouille, training to produce fruitfulness by tying the branches downwards.
Fibrous roots, the smaller, branching, or thread-like roots.
Forcing, the early ripening of fruits by artificial heat under glass.
Head back, to cut off the limbs of a tree, part way down.
Head down, to cut off the entire limbs or branches of a tree, or to cut down to an inserted bud.
Inflorescence, the manner in which the flowers are borne.
Lay-in, applied to selecting and fastening to a trellis or wall, new branches or shoots.
Lay in by the heels, to bury the roots of trees temporarily in a trench.
Leading shoot, the longest or main shoot of a limb or tree.
Lopping, cutting the branch down to the stem.
Maiden plant, a tree of one year's growth from the bud or graft.
Mulching, covering the ground about a tree with straw or litter to prevent drying.

Oblate, flattened, so that the shortest diameter is between the base and apex, like a flat turnip.
Obovate, reversed ovate, being largest from the foot-stalk or towards the apex.
Obtuse, rounded or blunt.
Ovate, egg-shaped, being the largest towards the foot-stalk.
Pedicel, the subdivision of a flower or fruit-stalk.
Peduncle, the flower or fruit-stalk.
Petals, flower-leaves, usually colored.
Petiole, leaf-stalk.
Pomology, the science of fruits.
Pyramidal, like a pyramid, usually nearly similar to conical, but longer.
Pyriform, pear-shaped, having more or less a drawn-out neck.
Ringing, the removal of a ring of bark round a branch, to impede the descending sap.
Serrate, notched or cut like saw-teeth.
Shanking, a diseased shrivelling of the foot-stalks of grapes.
Shorten-in, to cut off more or less of the outer parts of shoots.
Spongiole, the minute spongy extremity of a fibrous root.
Sport, an unusual departure or variation in a new seedling.
Spur, a short stubby shoot bearing fruit or fruit-buds.
Standard, a fruit tree in open ground, or not trained to a wall or trellis.
Stock, seedling tree, which supports the inserted bud or graft.
Stop, to pinch or cut off the point of a shoot, to prevent its further extension in growth.
Strike, to emit roots.
Tap-root, the main or central descending root.
Trellis, an upright, flat frame, for training fruit trees and grapes upon its face.
Wilding, a natural seedling.

INDEX TO THE DIFFERENT FRUITS.

[The standard names are in *Italic* letters. The synonymous names in Roman.]

ALMONDS.

PAGE

Amande Commune 46
Amandier a petit fruit 46
Amandier a gros fruit 46
Amandier a gros fruit doux 46
Amandier a coque tendre 46
Amandier des Dames 46
Amande Princesse 46
Amande Sultane 46
Amande Pistache 46
Amandier Pecher 46
Bitter Almond 46
Common Almond 46
Common Sweet 46
Doux a coque tendre 46
Great Soft-Shell 46
Great-fruited Sweet 46
Long Hard-Shell 46
Long Hard-Shell Almond 46
Ladies' Thin-Shell 46
Large Persian 46
Languedoc 46
Pistachia Sweet 46
Peach Almond 46
Pecher 46
Soft-Shell Sweet 46
Soft-Shell Sweet Almond 46
Sultan a coque tendre 46
Sultana Sweet Almond 46
Sultan 46

APRICOTS.

Abricot Royal 51
Abricot Peche 49
Abricot Commun 51
Abricot Precoce 52
Abricot Hatif 52
Abricotier 52
Abricotier blanc 52
Albergier 52
Alberge 52
Amande Aveline 48
Ananas 48
Angoumois 52
Anson's Imperial 49
Blotched Leaved Turkey 51
Black 52
Blenheim 51
Blanc 48
Breda 48

PAGE

Brussels 52
Brown Masculine 52
Briancon 50
Brown's Early 50
Burlington 50
D'Alexandrie 50
De Hollande 48
De St. Jean 49
De St. Jean Rouge 49
De Nancy 49
De Nancy 51
Dubois' Early Golden 49
Dubois' Early Golden Apricot . . . 49
Dunmore 49
Du Pape 52
Dunmore's Breda 49
Early Golden 49
Early Orange 52
Early Masculine 52
Early White Masculine 52
Germine 51
Gros Musch 50
Gros Precoce 49
Gros d'Alexandrie 49
Gros Fruhe 49
Grosse Germine 51
Hasselnussmandel 48
Hemskirke 50
Hunt's Moorpark 49
Kaisha 50
Large Early 49
Large Red 50
Large Turkey 51
Moorpark 49
Musch 50
Musch-musch 50
Noir 52
Newhall's Early 51
Oldaker's Moorpark 49
Orange 52
Persique 48
Persian 52
Peach 49
Peche 49
Peche Grosse 49
Purple 52
Red Masculine 52
Royal 51
Roman 56
Royal Peach 49
Royal Persian 52
Royal Orange 52

PAGE
123
123
123
123
123
123
123
124
124
106
125
123
121
67
68
69
70
70
70
71
73
75
75
75
83
94
123
123
124
125
125
137
67
73
66
177
177
167
123
167
167
157
180
167
167
123
123
168
109
167
167
124
171
103
104
159, 174
125
125
125
136
143
125
127
123
168
168
179
176
176
123
126

PAGE
181
180
166
169
169
169
173
74
95
180
73
163
155
180
180
180
169
Pippin
169
173
78
181
187
187
171
181
Virgil
169
74
75
169
169
169
161
d Streak
75
84
Pearmain
121
121
175
181
169
181
181
182
183
Parmain
64
ppin
78
84
nette
84
et
145
ng
145
76
173
h
169
169
matic Pippin
173
pple
126
169
er
180
175
ippin
171
93
Russet
181
74
irgil
76
145
168
170
farther
163
149
169
174
183

	PAGE
Father Abraham	133
Fall Queen	133
Fall Wineap	71
Fall Wine	77
Fallenwalder	79
Fort Miami	80
Favorite	133
Fulton	134
Frenchies	133
Fenton Sweeting	160
Ferdinand	133
Fama Gusta	170
Fall Beauty	133
Ferris	170
Fall Vandervere	118
Fall Jennetting	132
Fall Gennetting	132
Foundling	132
Funtling	132
Fleiner	133
Fall Harvey	132
Fall Pippin	78
Fameuse	77
Fallawater	79
Fenouillet Gris	170
Fenouillet Rouge	170
Flower of Kent	170
Flint Russet	152
Flushing Spitzenburgh	133
Formosa Pippin	155
Fry's Pippin	128
French Pippin	138, 149
French Crab	109
Franklin's Golden Pippin	133
Gate	69
Golden Pippin	69
Garden Royal	81
Gray Vandervere	136
Golden	170
Green Seek-no-further	137
Gault's Bellflower	170
Gloucester White	170
Gillet's Seedling	106
Gibbon's Smathhouse	118
Gibbon's Smokehouse	118
Gabriel	134
George	135
Gloucester Cheese	170
Goble Russet	170
Garnon's Apple	128
Gilpin	134
Gloria Mundi	174
Glace de Zelande	179
Glory of York	155
Golden Drop	128
German Green	79
Golden Spice	75
Green Mountain Pippin	79
Green Sweet	88
Greasy Pippin	88, 95
Green Bellflower	95
Garretson's Early	135
Giles	135
Gully	136
Giant	171
Golden Pearmain	171
Goodyear	171
Goodyear's Seedling	171
Governor	171
Granny Buff	168
Granny Earle	136
Grannewinkle	136

	PAGE
Great Vandevere	136
Gov. Seward	136
Golden Russet	71
Golden Ball	88
Golden Harvey	130
Golden Pippin	171
Golden Reinette	170
Golden Russet	131
Golden Sweet	81
Gray Apple	99
Green Newtown Pippin	93
Green Winter Pippin	98
Grise	99
Gross Reinette d'Angleterre	72
Gregson Apple	168
Gravenstein	88
Grave Slije	88
Grand Sachem	171
Grindstone	166
Green Everlasting	166
Gros Api Rouge	87
Harkness' New Favorite	176
Hollandburg	179
Hollandbury	179
Hopper	171
Heterich	179
Harrigan	174
Hampshire Greening	104
Harvest	84
Hay's Winter	116
Hollow Crown Pearmain	116
Honey Greening	88
Heicke's Winter Sweet	89
Housom's Red	139
High Top Sweet	139
Hunter	139
Hardingham's Russet	152
Hannah	171
Howard Russet	168
Hogan	161
Honey Sweet	150
Herman	138
Helen's Favorite	138
Hector	138
Hawley	137
Horse Apple	132
Horse Block	145
Honemaker Pippin	129
Haskell's Sweet	137
Hommacher Apfel	128
Hay's Winter Wine	114
Haymaker	129
Hartford Sweeting	137
Harrison	131
Hagloe	137
Hawthorden	171
Hampshire Yellow	171
Herefordshire Pearmain	88
Herefordshire Red Streak	177
Hinckman	175
Hoary Morning	173
Hollow-cored Pippin	95
Holland Pippin	138
Hubbardston Nonsuch	85
Imperial Vandervere	118
Irish Pitcher	174
Indian Queen	131
Indian Apple	136
Iron Apple	124
Inman	95
Indiana Jannetting	100
Irish Peach Apple	173

PAGE
66
70, 127
71
89
89
145
158
158
143
143
134
141
141
141
88
107
88
87
84
109
173
173
145
156
144
146
146
146
147
147
148
158
174
174
174
174
174
175
147
147
148
148
159
174
174
174
174
174
89
75
79
89
90
90
90
95
127
145
94
166
145
145
93
113
113
146
174
145
145
166
146

	PAGE
Mela Carla	146
Meangere	174
Minister	147
Michael Henry Pippin	91
Monstrous Pippin	174
Mouse Apple	147
Moose Apple	147
Murphy	175
New York Spice	148
Norton's Melon	89
Noll's No. 1	120
Neversink	149
Neisley's Winter	176
Newtown Pippin of Sanders	119
Neverfail	100
Niack Pippin	109
New Jersey Red Streak ?	181
Nodhead	140
Northern Sweet	149
Northern Golden Sweet	149
Nonpareille	175
Niger	179
New York Gloria Mundi	174
Newtown Spitzenberg	94
New Scarlet Nonpareil	177
Never-Fail	
Newtown Pippin	98
Newark King	175
Newark Pippin	149
Newark Sweeting	126
Northern Spy	94
Norfolk Beaufin	175
Nonesuch	175
Ohio Favorite	95
Old Golden Pippin	171
Old English Codlin	175
Old Pearmain	85
Old Nonsuch	102
Oldfield	182
Ohio Wine	141
Orange	149
Orndorf	149
Orne's Early	149
Osborn's Sweet	150
Osborn's Fall Sweet	150
Overman's Sweet	150
Old Royal Russet	175
Osceola	150
Old Town Crab	149
Ortley	95
Ohio Nonpareil	83
Old Nonpareil	175
Orange Sweet	81
Ortley Apple	95
Ortley Pippin	95
Oslin	175
Osgood's Favorite	145
Owen's Golden Beauty	162
Ox Apple	174
Oxford Peach	157
Ox Eye	94
Paradise Winter Sweet	150
Patterson Sweet	121
Pennsylvania Vandervere	118
Petit Api	87
Pomme d'Api	87
Pomme Royal	75
Philadelphia Pippin	78
Pomme Water	75
Pim's Beauty	79
Poughkeepsie Russet	93
Pearman Pippin	152
Primate	153
Progress	153
Potter's Large Gray Seedling	172
Prince's Red and Green Sweet	176
Paragon	151
People's Choice	151
Pfeffer	151
Parsons' Early	175
Phillips' Sweeting	97
Prolific Beauty	176
Pomme Roye	176
Polly Bright	176
Pomme de Rose	176
Pryor's Red	99
Prior's Red	99
Pitzer Hill	99
Pickman	152
Priestly	158
Pole Cat	177
Parmin Royal	85
Parmain d'Ete	121
Petersburgh Pippin	93
Pennock's Red Winter	176
Pennock	176
Pearson's Plate	
Peck's Pleasant	97
Pennington's Seedling	97
Peach Pond Sweet	151
Pecker	54
Petit Api Rouge	87
Philip Wick	86
Phillips' Reinette	124
Pie Apple	188
Pine Apple Russet	152
Pomme d'Api Rouge	87
Pompey	179
Pomme Grise	99
Pomme Royale	102
Pomme Rose	87
Pound Royal	162
Pomme Regelans	150
Pomme de Berlin	128
Pomme d'Anis	170
Pomme de Charles	146
Pomme Finale	146
Pound	176
Pomme de Caen	72
Portugal	226
Pomme de Neige	76
Porter	98
Princesse Noble Zoete	128
Priestley	176
Priestley's American	176
Prince's Harvest, or Early French Reinette	84
Pumpkin Russet	152
Pumpkin Sweet	152
Putnam Russet	106
Queen Ann	88
Quince	158
Quaker Pippin	176
Queen's	167
Randal's Best	154
Randal Best	154
Ragan	154
Raritan Sweet	154
Rambo	102
Rambour Franc	178
Rambour d'Ete	178
Raundell's Sweet	181
Red Spitzenberg	141
Red Pearmain	141
Red Winter Pearmain	141

PAGE
178
178
80
156
154
158
158
158
177
177
177
178
149
178
178
178
178
156
156
156
156
157
158
158
160
177
173
134
155
157
178
76
177
197
157
177
102, 115
107
71, 173
146
157
191
181
187
187
189
157
158
158
159
159
159
159
197
170
65
66
76
85
85
191
160
161
161
170
159
113
106
123
121
112
129

	PAGE
Sweet Bough	109
Sweet Romanite	112
Springer's Seedling	178
Striped Vandervere	113
Striped Ashmore	113
Smokehouse	113
Sine-qua-non	157
Sops of Wine	157
Sops in Wine	157
Spencer Sweeting	157
Stunner Pippin	468
Styre	
Striped Junesting	145
Stroat	158
Strast	158
Stal Clubs	113
Surprise	178
Sugar Loaf Pippin	178
Summer Rose	107
Summer Queen	158
Summer Golden Pippin	178
Summer Pearmain	121
Summer Pippin	138
Summer Rambour	178
Summer Sweet Paradise	158
Swaar	108
Sweet Russet	152
Sweet Pearmain	109
Sweet Harvest	109
Transparent de Zurich	179
Thom's Red Streak	179
Townsend	160
Tallow Pippin	88
Tallow Apple	88
Tompkins	75
Tulpahocken	79
Trenton Early	81
Tewksbury Blush	160
Tom Woodward's Pippin	95
Terry's Red Streak	102
Talman's Sweeting	110
Tallman's Sweeting	110
Trumbull Sweeting	160
Tart Bough	178
Tewksbury Winter Blush	109
Tolman Sweeting	110
Travers	155
Twenty-ounce Pippin	179
Tetofsky	111
Transparent Pippin	128
Transparent de Moscovie	179
Twenty Ounce	126
Twenty-ounce Apple	126
Vandervere of Cincinnati	113
Vandervere Pippin	113
Virginia Greening	160
Vermont	161
Virginia Sweet	174
Vandyne	95
Victuals and Drink	179
Vandevere	113
Victorious Reinette	170
Vrai drap d'Or	78
Watkins' Early	64
Watermelon	89
Watson's Vandervere	113
Warren Pennock	151
Waddel's Hall	161
Walworth	161
Walpole	161
Western Spy	162
Whitewater Sweet	162
White Seek-no-further	162
Wellington Apple	169
Winter Cheese	179
Willis' Sweet	179
Wagener	114
Wells	161
Well Apple	161
Warren Pippin	95
Waltz Apple	97
Washington	109
Welcome	128
West's Spitzenberg	129
Windower	136
White Vandervere	136
White Sweeting	163
Wetherell's White Sweeting	163
Winter Harvey	163
Winter Grixon	168
White Margil	174
White Doctor	179
Watson's Dumpling	169
Whare Reinette	73
Waxen Apple	69
White Apple	69
Week's Pippin	128
Wells's Sweeting	161
Westfield Seek-no-further	115
White Bell-Fleur	95
White Bellflower	95
White Detroit	95
White Winter Calville	179
White Calville	179
White Spanish Reinette	163
White Juneating	163
White Astrachan	179
White Pippin	72, 95
White Spice	75
Wine of Cole	76
Winter Sweet	89
White Pearmain	91
White Winter Pearmain	91
White Rambo	163
Williams	163
William's Favorite Red	163
William's Red	163
William's Early	163
William's Early Red	163
Willow	164
Willow Twig	164
Willow Leaf	164
Wood's Greening	116
William Penn	164
Winslow	165
Wing Sweeting	165
Winter Pearmain	174
Winter Wine	116
Winter Chandler	168
Woodward's Pippin	95
Wolman's Harvest	107
Winter Gennetting	100
Willow Leaf Pippin	95
White Hawthornden	171
Winter Pearmain	165
Winter Queen	180
Winter Queening	180
Wine Apple	116
Wine Sap	117
Wine Sop	117
White Apple	
Williams's Favorite	163
Wollaton Pippin	128
Woolman's Long	95

PAGE

nit Blanc . . . 194
ont . . . 194
n . . . 213
rat . . . 199
strueux . . . 199
nit Rouge . . . 219
Hildesheim . . . 196
le Hildesheim . . . 196
dif de Hildesheim . . . 196
dif . . . 196
. . . 213
. . . 194
. . . 215
. . . 214
. . . 214
Rouge . . . 214
. . . 215
. . . 215
. . . 204
. . . 189
. . . 189
. . . 189
. . . 215
. . . 217
. . . 215
. . . 215
. . . 215
Savoy . . . 199
rt . . . 216
. . . 216
. . . 215
. . . 218
. . . 204
Amorpel Kirsche . . . 204
Amorpel Kirsche . . . 204
Duke . . . 211
Morello . . . 215
Zucker Weichsel . . . 215
. . . 189
. . . 190
. . . 191
. . . 204
Mart . . . 204
che . . . 204
. . . 205
. . . 208
. . . 214
. . . 215
. . . 215
pe . . . 206
. . . 206
. . . 205
. . . 208
. . . 189
ère . . . 189
ndre . . . 189
. . . 211
Angleterre . . . 205
. . . 205
. . . 216
ne . . . 217
ubles . . . 216
. . . 220
. . . 220
. . . 220
. . . 205
. . . 205
. . . 216
Preserving . . . 216
. . . 205
. . . 206
. . . 214

	PAGE
Custer	216
Common English	215
Corone	215
Coûronne	215
Coroun	215
Cœur de Pigeon	194
Coularde	211
Common Red	194
Commune	194
Common Red	217
Common Sour Cherry	217
Crown	205
Circassian	189
Cleveland	191
Cleveland Bigarreau	191
Coe's Transparent	192
Cumberland	205
Cumberland Seedling	205
Conestoga	206
Clarke's Bigarreau	212
Chatenay	214
Cerise de Xavier	215
Coe's Late Carnation	216
Corwin	216
Clarke's Superb	216
Clarke's Bigarreau?	216
Cerise Indulle	217
Cream	217
Davenport's Early	216
Davenport	216
Davenport's Early Black	216
De Hollande	211
D'Espagne	211
Downton	207
Downer's Late	192
Downer	192
Downer's Late Red	192
Downing's Red Cheek	205
Double Flowering Kentish	216
Dredge's Early White Heart	216
Dutch Morello	218
Dwarf Double-Flowering	216
Double Heart	189
Doctor	192
Delicate	193
De 16 a-la-livre	196
D'Esperin	204
Donna Maria	206
Duchess of Pallua	207
Du Nord	215
Du Nord Nouvelle	215
De Prusse	215
De Spa	216
Early Black	215
Early White Heart	216
Early Purple Guigne	195
Early Purple Griotte	195
Early Duke	211
Early May	217
Early Richmond	194
Elton	194
Elkhorn	218
English Morello	218
Ever Flowering Cherry	225
Early Prolific	193
Elizabeth	207
Elliott's Favorite	207
English Amber	207
Favorite	207
Flesh-Colored Bigarreau	194
Florence	203
Flemish	217
Four to the Pound	219
Fraser's Black Tartarian	189
Fraser's Black Heart	189
Fraser's Black	189
Fraser's White Tartarian	220
Fraser's White Transparent	220
Fellow's Seedling	208
Gascoigne's Heart	215
Gean Amber	214
Grafton	208
Groote Princesse	208
Grosse Bigarreau Couleur de Chair	194
Gros Bigarreau Blanc	194
Gros Cœuret	199
Gros Bigarreau Rouge	219
Gridley	217
Grosse Schwarze Knoorpel	218
Griotte de Portugal	208
Grosse Cerise Rouge Pale	205
Griottier Rouge Pale	205
Griotte de Villennes	205
Gros Gobet	217
Guinier a Fruit Noir	215
Guigne Grosse Noir	215
Guigne Rouge Hative	215
Guigne Noir Tardive	218
Guigne Gros Blanc	194
German May Duke	195
Governor Wood	196
Grosse Guigne Noir Luisante	199
Great Bigarreau?	199
Guigne Noir Luisante	208
Harrison Heart	220
Herefordshire Black	215
Herefordshire Heart	215
Hildesheim Bigarreau	196
Honey	217
Hollandische Grosse	208
Holland Bigarreau	208
Holman's Duke	211
Hyde's Red Heart	217
Hildesheim	196
Hortense	196
Holland	208
Hoadley	209
Hovey	209
Herefordshire White	216
Hyde's Seedling	217
Hyde's Late Black	217
Imperial	209
Imperial Morello	209
Italian Heart	208
Jeffrey's Duke	211
Joc-o-Set	197
Kookuk	210
Kennicott	210
Kentish	217
Kentish	217
Kentish	194
Kentish Red	194
Kentish Red	217
Knevett's Late Bigarreau	208
Knight's Early Black	210
Kirtland's Mary	198
Kirtland's Mammoth	198
Kirtland's Large Morello	210
Knight's Late Black	217
Large Wild Black	215
Large Honey	217
Large White Bigarreau	220
Large Heart-Shaped Bigarreau	194
Lauermann's Kirsche	212

	PAGE
Large Heart-Shaped Bigarreau	199
Large Red Bigarreau	219
Lady Southampton's Yellow	218
Lady Southampton's Duke	218
Lady Southampton's Golden Drop	218
Large Black Bigarreau	218
Late Arch Duke	208
Late Duke	208
Late Duke	211
Large Mayduke	211
Late Kentish	217
Large Morello	218
Late Morello	218
Large Double-Flowering	218
Lion's Heart	218
Lemercier of E. and B.	196
Late Bigarreau	199
Large Heart-Shaped	199
Logan	200
Large Morello	210
Lemercier	211
Lindley	211
Leather Stocking	211
Late Honey	217
Lundis Gean	218
Louis Phillip	218
Madison	211
Mary	211
Manning's Early Black	218
Mazzard	215
Manning's Mottled	211
Maccarty	217
Madison Bigarreau	211
Manning's Late Black	218
Manning's Late Black Heart	218
May Duke	211
May Cherry	217
Merisier a fruit blanc	217
Millett's Late Heart Duke	211
Mottled Bigarreau	211
Morris' Early Duke	211
Montmorency	217
Montmorency a gros fruit	217
Montmorency a longue queue	194
Morello	218
Muscat de Prague	194
Monstreuse de Bavay	196
Monstrous May	205
Mercoilla de September	210
Morris Duke	211
Monstreuse de Mezel	199
Napoleon	212
Napoleon Bigarreau	212
New Large Black Bigarreau	199
Ox Heart	218
Osceola	200
Ohio Beauty	212
Ostheim	219
Ostheimer Weichsel	219
Ox Heart	220
Pie Cherry	194
Pie Cherry	217
Plumstone Morello	219
Portugal Duke	208
Portugal Duke	211
Prinzessin Kirsche	208
Prince's Duke	219
Precoce	217
Purple Guigne	195
Pontiac	201
Powhattan	201
Proudfoot	212
Proudfoot's Seedling	212
President	212
Pink Heart	219
Red Heart	215
Remington	219
Remington White Heart	219
Remington Heart	219
Rivers' Early Heart	
Rivers' Early Amber	216
Ronald's Large Black Heart	189
Ronald's Heart	189
Robert's Red Heart	212
Royal Native	211
Royal Duke	211
Ronald's Large Morello	218
Rumsey's Late Morello	219
Ronald's Black Heart	189
Reine Hortense	196
Rockport	201
Rockport Bigarreau	201
Red Jacket	202
Richardson	219
Red Bigarreau	219
Schone von Cholsy	189
Serrulated leaved Cherry	216
Small May	217
Spanish Black Heart	215
Sparkhawk's Honey	217
Sparrowhawk's Honey	217
Spotted Bigarreau	208
Spanish Yellow	207
Superb Circassian	189
Sussex	194
Sweet Montmorency	219
Shannon	208
Schwarze Neue Herr Kirsche	204
Sterets May	205
Sweedish	216
Sweedish Red Heart	216
Sparhawk	207
Tartarian	189
Thompson's Duke	211
Tobacco Leaved	217
Transparent Guigne	219
Transparent Gean	219
Transparent	219
Tradescant	
Tradescant's Black Heart	218
Turkey Bigarreau	208, 220
Turkey Bigarreau	208
The Doctor	199
Tardif-de-Hildesheim	196
Tecumseh	208
Triomphe of Cumberland	205
Tardive de Mons	210
Vail's August Duke	218
Very Large Heart	218
Virginian May	194
Virginian Wild Cherry	219
Virginia May Duke	219
Wendell's Mottled	218
Ward's Bigarreau	199
Wendell's Mottled Bigarreau	218
Waterloo	218
Wax Cherry	205
Werder's Early Black	218
Werder's Early Black Heart	218
Werdersche Frue Schwarze Herz Kirsche	218
West's White Heart	208
Weichsel mit gauzkurzen stiel	
Weeping or All Saint's	220
White Heart	216

	PAGE
White Transparent	216
White Tartarian	220
White Bigarreau	208
White Bigarreau	220
White Ox Heart	220
Wilder's Bigarreau de Mai	214
Wild English Cherry	215
Warren's Transparent	220
Wilkinson	220
Wellington	220
Yellow Honey	217
Yellow Spanish	208
Yellow or Golden	217
Yung To	216

CURRANTS.

American Black	225
Black Grape	225
Black English	225
Black Naples	223
Common Red	225
Common White	225
Cherry	225
Champagne	225
Common Black	225
Fertile Currant of Palnau	224
Gondouin	223
Gondouin Red	223
Goliath	224
Houghton Castle	224
Jefferson	225
Knight's Large Red	225
Knight's Early Red	225
Knight's Sweet Red	223
Large Red Dutch	224
Large Bunched Red	224
Long Bunched Red	224
Large White	224
Missouri Large-fruited	225
Missouri Estable	225
May's Victoria	224
Missouri	225
Morgan's Red	224
Morgan's White	224
Missouri Fragrant	225
New Red Dutch	224
New White Dutch	224
Palnau	224
Raby Castle	224
Rivers' White Grape	224
Red Dutch	224
Red Grape	224
Reeve's White	224
Red Flowering Currant	223
Striped Fruited	225
Victoria	224
White Dutch	224
White Crystal	224
White Leghorn	224
White Pearl	224
White Grape	224

GOOSEBERRIES.

Buerdsell's Duckwing	226
Capper's Bunker's Hill	228
Champagne	228
Collier's Jolly Angler	229
Crompton Sheba Queen	230
Early Sulphur	229
Green Walnut	229
Haughton's Seedling	229
Ironmonger	229
Keen's Seedling	229
Massey's Heart of Oak	229
Melling's Crown Bob	229
Pale Red	230
Parkinson's Laurel	229
Pitmaston Green Gage	229
Roaring Lion	230
Red Warrington	230
Taylor's Bright Venus	228
White Honey	230
Woodward's Whitesmith	230

GRAPES.

Ada	248
Arkansas	244
Allen's Seedling Hamburg	258
Alicant	258
Alexander's	247
Amber Muscadine	254
Amiens	254
American Muscadine	248
August Traube	254
Black Cluster	258
Black Morillon	258
Black Burgundy	258
Black Frontignan	258
Black Frontignac	258
Black Hamburgh	258
Black Prince	258
Black Spanish	258
Black Valentia	258
Black Portugal	258
Black Lisbon	258
Brinckle	471
Black Orleans	258
Black St. Peter's	258
Bland	244
Bland's Virginia	244
Bland's Madeira	244
Bland's Pale Red	244
Bourdales des Hautes Pyrenees	258
Boston	258
Brown Hamburgh	258
Burgunder	254
Bull or Bullett	248
Cambridge Botanic Garden	258
Canon Hall Muscat	255
Cape Grape	247
Catawba	244
Catawba Tokay	244
Chasselas Dore	254
Chasselas Blanc	254
Chasselas de Fontainebleau	254
Clinton	245
Cassady	471
Clara	471
Concord	471
Clermont	245
Clifton's Constantia	247
Clarence	246
Delaware	255
Decimanner	255
D'Arbois	254
De St. Jean	254
Diana	245
Dutch Hamburg	258
Early Black	258
Early Black July	254
Early White Teneriffe	254

	PAGE
Early White Muscadine	254
Eleinburgh	245
Elsenborough	245
Emily	472
Frementin Rouge	255
Fox Grape	247
Frankendale	258
Fromentean	255
Frontiac of Alexandria	255
Gris Rouge	255
Graham	472
Gibraltar	258
Golden Chasselas	254
Grizzly Frontignan	254
Grizzly Frontignac	254
Herbemont	246
Herbemont's Madeira	246
Heath	255
Hampton Court Vine	258
Imitation Hamburg	247
Isabella	246
Jacob's Traube	254
Jerusalem Muscat	255
July Grape	254
Kleinbranner	255
Lebanon Seedling	244
Lenoir	246
Longworth's Ohio	247
Lunel	255
Marximmer	255
Mammoth Catawba	245
Minor's Seedling	248
Madeleine	254
Madeleine Noir	254
Madeira	247
Malaga	255
Miller's Burgundy	254
Missouri	247
Missouri Seedling	247
Morillon Hatif	254
Muscat of Alexandria	255
Moschata Bianca	255
Moscado Bianco	256
Moscatel Common	255
Muscat Noir Ordinaire	253
Muscat Noir de Jura	258
Muscat d'Alexandrie	255
Muscat Blanc	255
Muscat Blanc de Jura	255
Muscateller	255
Muscat Rouge	254
Muscat Gris	254
Muscat Noir	253
Nepean's Constantia	256
Norton's Virginia	247
Norton's Seedling	247
Ohio	247
Passe longue Musque	255
Passe Musque	255
Pineau	253
Pocock's Damascus	258
Powell	244
Pond's Seedling	245
Purple Frontignan	253
Purple Constantia	253
Purple Hamburg	258
Ranfolak	255
Ranfoliga	255
Raabe	472
Raabe's No. 1	471
Raabe's No. 4	471
Raabe's No. 2	472
Raabe's No. 3	472
Roanoke	248
Red Traminer	255
Rother Traminer	255
Rother Klevner	255
Rothclauser	255
Rothe Reifler	255
Rothedel	255
Rothfranken	255
Raisin Precoce	254
Raisin de Champagne	254
Raisin de Frontignan	255
Red Muncy	244
Red Hamburgh	258
Red Constantia	254
Royal Muscadine	254
St. Clauser	255
Salisbury Violet	258
Schuylkill Muscadell	247
Schuylkill Muscadine	247
Scuppernong	248
Segar-Box Grape	247
Stuartlef's Seedling	248
Sir William Rowley's Black	258
Sir A. Pytche's Black	258
Small Black Cluster	253
Smart's Elsingburg	245
Spring Mill Constantia	247
Steward's Black Prince	258
Sumpter	246
Singleton	244
Schuylkill	247
Traminer	255
Tokayer	255
Tasker's Grape	247
Tottenham Park Muscat	255
To Kalon	245
True Burgundy	258
Valentine's	258
Victoria	258
Warner's Black Hamburgh	258
White Catawba	245
White Muscat of Alexandria	255
White Muscat	255
White Muscat of Lunel	255
White Frontignan	255
White Constantia	255
White Frontnine	255
White Sweet Water	255
Winne	247
Wilmot's New Black Hamburgh	258
Worthington	245
Zane	245

NECTARINES.

Anderson's	257
Anderson's (of some)	
Anderson's Round	260
Aromatic	257
Barker	257
Black	
Black Murry	259
Boston	256
Broomfield	259
Brugnon Hatif	257
Brugnon, Red at the Stone	257
Brugnon de Newington	
Brugnon Musque	259
Brugnon Violette Musquee	259
Claremont	257
Common Elruge	257

	PAGE
Gowdray White	258
Duke of Tellier	257
D'Angleterre	
Downton	257
Duc du Telliers	257
Duc de Tilly	257
Duc de Tello	257
Du Tilley's	257
Early Violet	257
Early Brugnon	257
Early Newington	258
Early Black Newington	258
Early Black	258
Elruge	257
Emerton's New White	258
French Yellow	258
Fairchild	259
Fairchild's Early	259
Fine Gold-Fleshed	259
Flanders	258
French Newington	260
Genoa	260
Golden	259
Hardwicke's Seedling	258
Hardwicke	258
Hampton Court	257
Hunt's Tawny	258
Hunt's Large Tawny	258
Hunt's Early Tawny	258
Jaune Lisse	260
Large Early Violet	258
Late Yellow	260
Large White	258
Late Green	260
Large Scarlet	257
Lewis	256
Lord Selsey's Elruge	257
Lucombe's Black	258
Lucombe's Seedling	258
Murrey	259
Murry	259
New White	258
Neat White	258
New Scarlet	257
Newington	260
New Dark Newington	
New Early Newington	258
Oatlands	257
Orange	259
Old White	
Old Newington	260
Old Roman	259
Orange	258
Prince's Golden	260
Perkins' Seedling	256
Peterborough (of some)	
Peterborough	260
Petite Violette Hative	257
Pitmaston Orange	248
Red Roman	259
Roman	259
Rough Roman	260
Scarlet Newington	260
Scarlet	260
Stanwicke	259
Sweet Yellow	260
Sion Hill	260
Smith's Newington	260
Spring Grove	257
Temple's	257
Vermash (of some)	260
Violette Hative	257
Violet	
Violette Angervillieres	
Violette Musquee	257
Violet, red at the stone	257
Violet Musk	
William's Orange	258
Williams' Seedling	258
Violet Grosse	258

PEACHES.

	PAGE
Alberge	281
Allen	281
Atwater	281
Anne	290
Admirable	290
Almond	290
Abricotee	296
Acton Scott	290
Admirable Tardive	290
Admirable Jaune	281, 296
Algiers Yellow	293
Algiers Winter	293
Apricot Peach	296
Astor	290
Avant Rouge	294
Avant Blanche	295
Bachelder	281
Baxter's Seedling, No. 1	479
Barnard	281
Belle de Beaucaire	290
Beauty of Beaucaire	290
Bergen's Yellow	279
Brentford Mignonne	281
Briggs	281
Belzar's Early Raretye	291
Belle Cheereuse	291
Bennett's Rareripe	291
Beauty of Salisbury	290
Barrington	290
Baltimore Beauty	290
Bellegarde	281
Belle de Vitry	290
Bellis	290
Belle Beaute	274
Belle de Vitry	290
Belle de Paris	276
Bergen	279
Blood Clingstone	281
Blood Cling	281
Bourdine	276
Boudin	276
Brevoort	279
Brevoort's Morris	279
Brevoort's Seedling Melter	279
Brown Nutmeg	294
Buckingham Mignonne	290
Bullard's Clingstone	283
Bullard's Seedling	283
Burrows Beauty	283
Carey's Mammoth Cling	283
Cable's Late	283
Cable's Late Melocoton	283
Cambridge Belle	283
Clarke	283
Canary	291
Chillian	291
Cable's Medium Melocoton	291
Cable's Early	291
Cable's Early Melocoton	291
Crawford's Late	278
Crawford's Superb Melocoton	278

	PAGE
Chinese Peach	282
Charlotte	291
Catherine Cling	292
Cardinale	
Catherine	292
Chancellor	291
Chancelliere	291
Clinton	282
Claret Clingstone	281
Cole's Early Red	282
Coledge's Favorite	278
Cooledge's Early Red Rareripe	278
Colonel Ansley's	290
Congress	291
Congress Cling	291
Cole's White Malocoton	276
Columbia	278
Crawford's Late Melocoton	278
Crawford's Early	272
Crawford's Early Melocoton	272
Crawford's Superb Malacatune	278
Cut-Leaved	292
Down-Easter	288
Doctor Cooper	288
Douglass	288
Double Montagne	288
Double Mountain	288
Dorsetshire	277
Druid Hill	272
Elica	288
Elmira	288
Early York, of New Jersey	277
Early Crawford	272
Early Galande	281
Early Barnard	281
Early Malden	286
Early Robinson Crusoe	292
Eastburn's Choice	288
Eastburn	288
Early Anne	290
Early Tillotson	279
Early York	278
Early Newington Freestone	274
Early Newington	274, 295
Early Sweet-Water	294
Early Admirable	290
Early Purple Avant	274
Early May	274
Early Vineyard	274
Early Red Nutmeg	294
Early White Nutmeg	295
Early Purple	274
Early Royal George	281, 294
Early Red Rareripe	288
Edgar's Late Melting	291
Emperor of Russia	292
French Rareripe	280, 281
Fulkerson	288
Fulkerson's Early	288
Favorite	292
Favorite Red	292
Flat Peach of China	282
Fox's Seedling	292
French Mignonne	274
French Royal George	281
French Magdalen	294
Freestone Heath	276
French Bourdine	276
Fine Heath	274
Gorgas	472
Golden Rareripe	281
Green Rareripe	294
Gest's Superb	292
Grosse Persique Rouge	295
Gest's Large Freestone	292
Galand	284
George the Fourth	274
Gold Fleshed	281
Golden Mignonne	281
Green Nutmeg	290
Grosse Mignonne	274
Grimwood's Royal George	274
Grimwood's New Royal George	274
Griffin's Mignonne	294
Grimwood's Royal Charlotte	291
Green Catherine	288
Gros Malecaton	285
Golden Ball	292
Hatch	284
Hale's Melocoton	284
Hale	284
Hartshorn	284
Hastings	284
Hall's Down-Easter	288
Honest John	277
Hardy Galande	281, 284
Hovey's Cambridge Belle	288
Heath's Freestone	284
Hoffner	292
Hoffner's Seedling	292
Henry Clay	284
Haine's Early Red	277
Heath Clingstone	274
Heath	274
Hoffman's Pound	288
Hogg's Melocoton	288
Hyslop	275
Hyslop's Clingstone	275
Hill's Madeira	285
Ispahan	292
Incomparable	285
Italian	276
Jane	272
Jaques	275
Jaquish	275
Jaques' Rareripe	275
Jose Sweet	285
Jones' Early	285
Jones' Large Early	285
Java	288
Johnson's Early Purple	274
Judd's Melting	276
Kenrick's Heath	284
Kew Early Purple	291
Kennedy's Carolina	277
Kennedy's Lemon Cling	277
Lafayette Clingstone	288
Lafayette	288
Large Melting	288
Late Chancellor	291
Large Early York	277
Large American Nutmeg	294
L'Admirable	290
Large French Mignonne	274
La Royale	276
Late Admirable	276
La Grange	288
Large Red Rareripe	275
Large Red Rareripe	288
Lady Ann Steward	276
Late Red Rareripe	277
Lady Gallatin	288
Large Yellow Rareripe	280
Late Admirable Cling	288

	PAGE
Large White Clingstone	289
Late Yellow Alberge	293
Largest Lemon	277
Large Newington	293
Lemon Clingstone	277
Lord Montague's Noblesse	286
Lockyer's Mignonne	294
Lord Fauconberg's Mignonne	
Long Yellow Pine Apple	277
Luscious White Rareripe	276
Livingstone's N. Y Rareripe	277
Lincoln	286
Magistrate	293
Majestrate	293
Madeira	285
Madeira Freestone	285
Merriam	285
Mrs. Poinsett	285
Moore's Favorite	286
Melting	293
Morrisania	293
Monstrous Freestone	294
Madeline of Courson	294
Malden	286
Madeleine de Courson	294
Madeline Rouge	294
Malta	276
Malte de Normandie	276
Malagatune	288
Malacatune	288
Marie Antoinette	280
Mellish's Favorite	286
Mignonne	274
Millet's Mignonne	294
Montague	288
Montauban	283
Motteux's	276
Morris's Red Rareripe	275
Morris Red	275
Morris White Rareripe	276
Morris White	276
Morris White Freestone	276
Morrisania Pound	293
Morrison's Pound	293
Monstrous Pavie	285
Monstrous Pompone	285
Monstrous Clingstone	285
Newington Cling	293
New Royal George	294
Narbonne	276
New Cut-leaved	292
Neill's Early Purple	274
New Royal Charlotte	291
New York White Clingstone	289
Newington	274, 293
Nivette	277
Nivette Veloutee	277
Noisette	291
Noblesse	286
Noir de Montreuil	
New York Rareripe	277
Newman	286
Nonpareil	293
Owen	287
Owen's Lemon	287
Owen's Lemon Rareripe	287
Oldmixon	278
October Yellow	293
Oldmixon Freestone	278
Oldmixon Clearstone	278
Oldmixon Clingstone	278
Old Newington	293

	PAGE
Orange Clingstone	296
Orange	296
Orchard Queen	286
Old Royal Charlotte	291
Philadelphia Freestone	276
Paragon	287
Pecher d'Ispahan	292
Poinsett	287
Poole's Yellow	287
Phyteiger	293
Pavie Admirable	285
Pavie de Pomponne	285
Pavie de Pomponne Grosse	285
Pavie Rouge de Pompone	285
Pavie Caum	285
Pavie Monstreux	285
Peche Royale	276
Peche Malte	276
Peche Jaune	281
Peen-To	282
Pine-Apple Clingstone	277
Pourpree de Normandie	274
Pourpree Hative	274
Pourpree Tardive	276
Poole's Large Yellow	287
Poole's Late Yellow Freestone	287
President	278
Prince's Red Rareripe	278
Purple Avant	274
Purple Alberge	281
Prince's Paragon	287
Reeve's Favorite	293
Ronald's Mignonne	281
Red Rareripe	275
Red Rareripe	293
Red Magdalen	294
Reine des Vergers	296
Red Nutmeg	294
Red Avant	294
Red Cheek	293
Red Magdalen	281
Red Cheek Malocoton	293
Red Alberge	281
Red Heath	274
Reid's Weeping	295
Royal Kensington	274
Ronald's Seedling Galande	274
Royal Sovereign	274
Royale	276
Rouge Paysanne	294
Royal George	294
Rose	294
Rosanna	294
Rosebank	279
Rodman's Red	288
Shanghai	287
Site's Old Zack	287
Skinner's Superb	287
Saint George	288
Smock	288
Smith's Favorite	288
Swalsh	294
Swaize	294
Smock Clingstone	295
Spring Grove	295
Slocum's Early	295
Smith's Newington	295
Sanguinole a Chair Adherente	
Scott's Early Red	294
Serrated	295
Selby's Cling	289
Smock Freestone	288

	PAGE
Smith's Newington	274
Smith's Early Newington	274, 295
Smooth-leaved Royal George	281
Snow	287
Stewart's Late Galande	291
Strawberry	294
Superb Royal	274
Superb	294
Sweet Water	294
Swiss Mignonne	274
Serrate Early York	278
Scott's Nonpareil	293
Sulhamstead	295
Siebott	295
True Early York	278
Tillotson	279
Tuft's Early	289
Tuft's Rareripe	289
Turbell	289
Teton de Venus	276
Tippecanoe	288
True Red Magdalen	294
Tice	295
Tice's Red and Yellow	295
Unique	292
Vandermark	295
Violet Hative Grosse	281
Vanguard	286
Van Zandt's Superb	279
Veloutee Tardive	287
Violette Hative	281
Vineuse	274
Vineuse de Fromentin	274
Ward's Freestone	280
Ward's Late Free	280
Ward's Free	280
Weld's Freestone	289
Washington Rareripe	289
Walburton	289
Walburton Admirable	289
Waxen Rareripe	279
Washington	289
Washington Red Freestone	289
Walter's Early	279
Washington Clingstone	289
Weeping	296
White Rareripe	276, 277
White Malacaton	276
White Nutmeg	295
White Avant	295
White Imperial	279
White Blossomed Incomparable	295
White Blossom	295
Willow Peach	295
Williamson's New York	289
White Heath	274
White Clingstone	289
Yates' Early	296
Yellow Admirable	296
Yellow Malocoton	288
Yellow Malagatune	283
Yellow Alberge	281
Yellow Rareripe	281
Yellow Rareripe	280
Yellow Pine Apple	277
Yellow Red Rareripe	280
Yellow Barnard	281
Zoar Beauty	296

PEARS.

Abbott	348
Adele d' St. Denis	349
Admiral	366
Amiral	295
Adam's	366
Angleterre Noisette	339
Ambrette	339
Ambre Gris	339
Ambrette d'Hiver	339
Ah! Mon Dieu	339
Alpha	343
Althorpe Crassaume	349
Amire Joannet	366
Ambrosia	366
Amande Double	339
Amanda's Double	339
Amoselle	339
Andrews	343
Ananas	
Ananas d'Ete	339
Ananas	339
Angleterre	366
Argoni	
Archiduc d'Ete	366
Aston Town	339
Autumn Colmar	339
Autumn Bergamot	339
Autumn Paradise	349
Baronne de Mello	353
Bankerline	349
Beurre Suisse	350
Beurre Beaulieu	350
Beurre d'Rhine	350
Beurre Charron	351
Beurre Noirchain	351
Beurre Kossuth	351
Beurre Gifford	351
Beurre Gifford	351
Beurre Moire	352
Beurre Nantais	352
Beurre Superfine	352
Beurre Bachelier	352
Beurre Millet	352
Beurre Bretonneau	352
Beurre de Waterloo	352
Beurre Audousson	352
Beurre Sprin	354
Beurre Steltman	354
Beurre Clairgeau	354
Beurre Coloma	357
Beurre Chaptal	353
Beurre Curtet of A. Leroy	361
Beurre St. Nicholas	364
Beurre Oudinot	379
Beurre Scutin	390
Beurre de Bollwiller	390
Beurre Adam	391
Burlinghame	391
Burlingame	391
Bringewood	356
Bridmont	357
Bordenave	356
Boussock	313
Brandywine	313
Belle Angevine	354
Brown St. Germain	335
Bonne des Zees	356
Bonne d'Esee	356
Belle Epine Dumas	344
Beurre Langlier	312
Beurre Easter	317
Beurre Coit	329
Belle Excellent	349

PAGE

Precel . . . 880
. . . 880
. . . 846
. . . 858
. . . 824
. . . 850
. . . 849
. . . 854
. . . 855
. . . 860
. . . 898
. . . 822
. . . 823
J'Arandore . . . 888
. . . 897
. . . 868
. . . 814
. . . 814
. . . 817
illes . . . 817
. . . 817
. . . 817
uveau . . . 817
. . . 849
. . . 890
. . . 891
. . . 891
. . . 889
. . . 889
. . . 889
. . . 889
. . . 889
. . . 896
. . . 896
. . . 400
. . . 854
. . . 898
. . . 400
ecote . . . 817
. . . 859
. . . 867
. . . 867
. . . 884
. . . 854
. . . 855
. . . 855
. . . 855
. . . 824
. . . 812
gres . . . 817
. . . 891
. . . 856
. . . 891
. . . 818
er . . . 818
. . . 899
. . . 891
. . . 815
. . . 869
. . . 856
. . . 894
. . . 894
. . . 894
. . . 870
. . . 891

	PAGE
Bujaleuf	
Bourgermester	391
Bonne de Malines	346
Broughim	356
Brown Bourre	350
Brocas Bergamot	369
Braddock's Field Standard	377
Broom Park	391
Bretagne le Cour	334
Brown St Germain	
Brande's St. Germain	
Buffum	318
Buffum	318
Burnett	391
Butter Pear	322
Captif d' St. Helena	366
Calebasse Deleinge	393
Chapin	368
Chapman	393
Citron of Bohemia	392
Calliiot Rosat	399
Calebasse d'Ete	358
Caen du France	357
Catinka	357
Canandaigua	357
Catherine	357
Celestin	343
Chaptal	358
Chancellor	358
Charles Van Mons	358
Charles Van Hoogten	358
Christmas	358
Coter	360
Coit	319
Conseiller Ramues	359
Countess of Lunay	359
Comtesse de Lunay	359
Collins	360
Coffin's Virgalieu	394
Calliot Rosat d'Ete	399
Capiumont	357
Calabasse Rose	315
Cabot	392
Capehaf	357
Calebasse	392
Calebasse Double Extra	392
Calebasse d'Hollande	392
Calebasse Grosse	392
Capucin	392
Claire	392
Calhoun	357
Canning	317
Catillac	392
Cadilloc	392
Cellite	380
Chelmsford	393
Charles of Austria	392
Charles d'Autriche	392
Chaumontel tres gros	317
Chaumontel	359
Chapman's	380
Chambers' Large	334
Chambrette	400
Citron	360
Citron des Carmes	331
Clara	392
Clinton	392
Clion	344
Compte de Lamy	360
Comprette	393
Commodore	393
Copea	394

	PAGE
Colmar Epine	360
Colmar Neill	350
Comtesse de Fremol	367
Compte de Michaux	397
Colmar Bosc	397
Colmar des Champs	314
Columbia	319
Columbian Virgalieu	319
Columbian Virgalouse	319
Comstock	396
Comstock Wilding	396
Colmar	396
Colmar Dore	330
Colmar d'Hiver	325, 330
Colmar Jaminette	373
Colmar Gris	330
Colmar Souveraine	330
Colmar Van Mons	330
Colmar Charnay	396
Colmar d'Aremberg	330
Colmar Neil	397
Colmar Preule	330
Colmar Doree	396
Crawford	396
Croft Castle	396
Cross	360
Crassane	396
Cresane	396
Cuisse Madame	
Cuisse Madame	
Cushing	360
Cumberland	396
Cyprus Pear	394
Cuvelier	396
Dallas	360
De Sorlus	362
Des Nonnes	361
Des Nones	361
Despoelberg	395
Delice d'Hardenpont of Angers	361
Delices d'Hardenpont du Nord and Belgium	361
Delices de Mons	362
Delices Charles Van Mons	362
Dillon	362
Dearborn	394
De deux fois Lans	394
Downing	473
Doyenne Downing	473
Doyenne Boussock Nouvelle	318
Doyenne Gris d'Hiver Nouveau	321
Doyenne d'Alencon	321
Doyenne Gray	322
Doyenne White	322
Doyenne Musque	355
Doyenne Dillen	362
Doyenne Rose	362
Doyenne Robin	362
Doyenne Sieulle	362
Doyenne Santellette	362
Doyenne Goubalt	362
Doyenne du Cornice	362
Doyenne de Fais	362
Doyenne d'Hiver	394
Downton	394
Dorr	394
D'Ambre	397
D'Amour	394
D'Abondance	331
D'Aremberg Parfait	314
D'Auch	393
D'Austrasie	372

	PAGE
Dillon	362
Dearborn's Seedling	330
De Vallee	400
De Keinzheim	400
Des Trois Tours	313
De Melon	313
Dean's Summer	321
De Louvain	361
Delices d'Hardenpont	361
Delices d'Ardenpont	361
De Vigne Pelone	367
Deschampe	314
De Maune	393
De Tonneau	334
Diel's Butterbirne	313
Diel	318
Diamant	369
Dingler	360
Diæ	323
Dorothee Royale	313
Doyenne d'Ete	321
Doyenne	322
Doyenne Blanc	322
Doyenne Panache	323
Doyenne Galeux	322
Doyenne Bousouck	313
Doyenne Gris	322
Doyenne Rouge	322
Doyenne Roux	322
Downham Seedling	370
Doyenne d'Hiver	317
Doyenne du Printemps	317
Doyenne d'Automne	322
Dumortier	394
Dunmore	365
Duchesse of Angoulems	364
Duchess of Mars	366
Duchesse de Mars	366
Duchesse of Orleans	364
Dundas	366
Duc d'Aremberg	314
Du Patre	317
Dumas	344
Duc de Bordeaux	344
Duchess of Berri	366
Duchess of Berry	366
Dusnas	331
Duquesne d'Ete	394
Early Druselona	394
Early Butter of Oin	367
Early St. Germain	358
Elizabeth Van Mons	366
Excellentissima	394
Early Sugar	366
Early Beurre	388
Early Bergamot	394
Early Queen	397
Early Catherine	394
Early Rousselet	394
Easter Beurre	317
Easter Bergamot	339
Echassery	367
Echasserie	367
Edward's Elizabeth	366
Edward's Henrietta	370
Edward's William	400
Ellanrioch	396
Emerald	394
English Red Cheek	395
English Beurre	388
English Bergamot	389
English Autumn Bergamot	389

	PAGE
Enfant Prodige	395
Epargne	372
Epine Rose	399
Epine d'Ete Couleur Rose	399
Epine d'Ete	399
Etourneau	346
Eyewood	367
Epine Dumas	344
Eliza d'Heyst	350
Episcopal	395
Fondante Pariselle du Cornice Horticole	361
Figue	368
Figue Vert	368
Feaster	391
Fondante de Charneuse	368
Fondante de Malines	368
Frederika Bremer	369
Famenga	395
Foster's St. Michael	395
French Jargonelle	395
Ferdinand de Meester	396
Fingal's	396
Figue of Naples	367
Fig Pear of Naples	367
Fin Or d'Hiver	395
Fleur de Guignes	358
Flemish Beauty	334
Flemish Bon Chretien	391
Fondante	334
Fondante Musquee	399
Fondante Van Mons	368
Fondante d'Automne	312
Fondante du Bois	395
Fondante de Panisel	330
Fondante de Mons	330
Forme de Delices	395
Forelle	368
Forellen-birne	368
Forme de Marie Louise	377
Fortunee	395
Frederic de Wurtemburg	368
Frederick of Wurtemburg	368
Franc Real d'Hiver	395
Franc Real d'Ete	334
Franc Real	395
Franklin	378
Fine Gold of Summer	395
Fin Or d'Ete	395
Fulton	328
Gansell's Late Bergamot	369
Gideon Puridante	369
General Taylor	478
General Lamoriciere	374
Green Catherine	394
Green's Germantown	358
Grand Soleil	369
Green Mountain Boy	369
Gros Romain	390
Grise Bonne	396
Gros Rousselet	399
Gansell's Bergamot	369
Garde d Ecosse	395
Gendesheim	395
Germain Baker	324
Gil-o-gile	395
Gil-o-gil	395
Gloul Morceau	325
Gloux Morceaux	325
Golden Beurre	350
Golden Beurre of Bilboa	326
Gore's Heathcot	326
Goulu Morceau	325

PAGE
ling 329
n's Egg 397
rmentier 395
ival 396
ursey 330
Jersey 330
ranches 330
oulogne 343
our 377
ron les Carmes 331
331
366
315
Second 360
377
377
397
330
313

	PAGE
Medaille	377
Messire Jean	397
Messire Jean Gris	397
Messire Jean Blanc	397
Messire Jean Doree	397
Michaux	397
Milanaise Cuvelier	346
Mon Dieu	394
Moor-Fowl Egg	397
Moor-Fowl Egg	
Mouth Water	331
Mollett's Guernsey Beurre	351
Mollett's Guernsey Chaumontelle	351
Moreau	377
Monsieur Jean	397
Monsieur le Cure	344
Mr. John	397
Muscat Petit	397
Muscat Robert	397
Muscat Fleure	331
Musk Robine	397
Muscadine	377
Musk Summer Good Christian	399
Muskingum	397
New Swan's Egg	400
Napoleon	378
Nawmkeag	397
New York Red Cheek	335
New Autumn	331
Ne Plus Meuris	316
New St. Germain	335
Nelis d'Hiver	344
Niell	397
No. 8 of Van Mons	399
Nouveau Poiteau	332
New Pear	332
Noel	358
No. 1599 of Van Mons	390
No. 1238 of Van Mons	392
Oakley Park	378
Oakley Park Bergamot	378
Oxford Chaumontel	359
Orpheline d'Enghein	314
Onondaga	332
Onondaga Seedling	332
Orange Bergamot	378
Orange Pear	378
Oudinot	379
Osborn	379
Osband's Summer	379
Osband's Favorite	379
Oti	379
Oswego	380
Oswego Beurre	380
Oliver's Russet	398
Owen	398
Orange d'Hiver	401
Pendleton	331
Pendleton's Early York	331
Pengthely	380
Parmentier	366
Penfield	338
Payenchi de Perigord	334
Poire de Payency	334
Poire de Perigord	334
Poire St. Andre	335
Poire de Boulogne	348
Poire d'Albret	331
Poire d'Abondance	331
Pratt	331
Plymouth	318
Providence	318
Plombgastel	331
Plumbgartel	331
Plougastel	331
Paul Thielen	380
Payency	334
Pater Noster	317
Passans du Portugal	368
Paquency	334
Pailleau	398
Paradise d'Automne	349
Parkinson's Warden	318
Paddington	389
Passe Colmar	380
Passe Colmar Epineaux	380
Passe Colmar Gris	380
Perdreau	394
Petit Muscat	397
Petit Rousselet	399
Petre	380
Pennsylvania	380
Philippe de Paques	317
Pitt's Prolific	398
Pitt's Surpasse Marie	398
Pickering Pear	334
Piper	334
Poire Guillaume	311
Poire des Tables des Princes	373
Poire a la Reine	397
Poire de Chypre	394
Poire Sans Peau	388
Poire de Rose	399
Poire Ananas	389
Poire d'Amboise	350
Poire de Cadet	354
Poire de Louvain	361
Poire Truite	368
Poire-Glace	400
Poire Niell	397
Poire a Gobert	395
Pope's Scarlet Major	398
Pope's Quaker	398
Pound	334
Primitive	397
Prince's Sugar	396
Prince's Sugar-Top	399
Princesse de Parme	377
Princess of Orange	398
Princesse d'Orange	398
Princesse Conquete	398
Precel	380
Present de Malines	380
Pitt's Marie Louise	398
Prince's St. Germain	335
Pulsifer	331
Princess Royal	331
Queen Caroline	398
Queen of Pears	398
Queen's Pear	397
Queen of the Low Countries	332
Quilletette	398
Raymond	399
Reed's Seedling	380
Regnier	478
Rousselet d'Hiver	377
Rousselet Double Esperin	338
Rosabirne	
Richard's Beurre	399
Rapalje	332
Rapalje's Seedling	332
Rallay	332
Red Muscadel	395
Real Jargonelle	373

	PAGE
Red Cheek	395
Red Beurre	
Red Doyenne	391
Reine des Pays Bas	393
Reine Caroline	393
Reine des Poires	398
Red-cheeked Seckel	335
Regintin	390
Rousselet Hatif	394
Rousselet de Rheims	399
Rousselet	399
Roi de Rome	378
Roi de Wurtemberg	325
Rousselet de Meaux	398
Rostiezer	335
Robertson	345
Royal Tairling	389
Robert's Keeping	389
Ropes	393
Rose	333
Rondolet	382
Rushmore Bon Chretien	396
Rousselet	399
Souveraine d'Ete	384
Styer	354
St. Jean Baptiste	384
St. Mesmin	383
Sterling	384
St. Michael Archange	384
Shurtleff	384
Shurtleff's Seedling	384
Sagaret	333
Schenck's August Watermelon	372
Schenck's Pear	372
Sentilet	368
Serrurier	388
Seigneur d'Esperin	312
Seedling Seckel	329
Soldat d'Esperin	337
Soldat Labourer d'Esperin	337
Soldat Labourer, of some	314
Smith's Moyamensing	333
Smith's Bordenave	356
Smith's Haddington	371
Smokehouse	372
St. Galen	336
St Marc	342
St. Nicolas	364
Sheldon	338
Signoret	338
Serrurier d'Automne	338
Summer Virgalieu	321, 379
Summer Pine Apple	339
Summer Calebasse	358
Suzette de Bavay	335
Suzette de Bavay Esperin	335
Stone	393
Swan's Orange	332
Saint Sampson	373
Saint Lambert	373
Sabine d'Ete	396
Sanspeau or Skinless	333
Satin Vert	399
Saint Germain de Martin	399
Sabine	372
Seckel	335
Seckle	395
Seigneur d'Hiver	317
Short's St. Germain	399
Sieulle	363
Skinless	333
Sickel	335
Smith's Pennsylvania	330
Snow Pear	322
Spanish Bon Chretien	391
Spice or Musk Pear	390
Spina	391
St. Jean	366
St. John's Pear	366
St. Jean Musques Gros	397
St. Germain d'Ete	399
St. Michael	322
St. Michel Dore	322
St. Ghislain	336
St. Andre	338
St. Germain Blanc	397
St. Germain	
St. Germain Gris	
St. Germain Panachee	
Styrian	399
Stevens' Genesee	338
Stephen's Genesee	338
Striped Germain	
Striped Long Green	
Staunton	369
Sugar Pear	364, 396
Sugar Top	399
Summer Bergamot	396
Summer Doyenne	321
Supreme	395
Summer Beauty	395
Summer Portugal	385
Summer Franc Real	334
Summer Rose	399
Sucres de Hoyerswerda	399
Sugar of Hoyerswerda	399
Summer Thorn	399
Summer Bon Chretien	399
Summer Good Christian	399
Summer St. Germain	399
Summer Bell	400
Sullivan	400
Surpasse Marie Louise	
Surpasse Virgalieu	340
Surpasse Virgouleuse	340
Swiss Bergamot	400
Sweet Summer	373
Swan's Egg	409
Sylvange	409
Syckle	335
Theodore	365
Theodore Van Mons	365
Tarquin	400
Tilton	359
Tea	365
Terling	339
Thorny Rose	399
Thompson's	343
Trouve de Montigny	356
Trout Pear	368
Tyson	341
Triomph de Jodoigne	385
Trompe Valet	339
Upper Crust	365
Union	334
Urbaniste	343
Uvedale's St. Germain	334
Uvedale's Warden	334
Van Assche	345
Van Assene	345
Vanasse	345
Van Ashe	345
Vesouriere	336
Valles Franche	400

PAGE
415
416
425
419
425
416
409
425
425
425
416
427
419
421
421
414
414
410
410
410
430
425
425
425
425
416
410
425
422
425
417
423
424
425
425
426
427
428
416
425
402
410
410
417
417
417
417
417
425
426
421
423
426
427
417
417
417
417
417
417
417
422
418
426
426
424
424
424
416
426
420
422
423

	PAGE
Damask	427
De Virginie	416
Dennisson Red	417
Denniston's Albany Beauty	415
Denniston's Superb	410
Denyer's Victoria	424
Diamond	426
Diapree Rouge	428
Die Violette Konigian Claudie	418
Downton Imperatrice	417
Domine Dull	418
Drap d'Or	417
Dutch Prune	418
Dutch Quetzen	418
Duane's Purple French	418
Early Favorite	419
Early Prolific	419
Early Forcing	429
Early Purple	418
Early Yellow	426
Early Scarlet	416
Early Damson	426
Early Orleans	410
Early Morocco	421
Early Black Morocco	421
Early Damask	421
Early Tours	426
Early Violet	426
Early Royal	418
Egg Plum	424
Elfrey	418
Elfry's Prune	418
Emerald Drop	418
English Pond's Seedling	418
Fair's Golden Drop	410
Flushing Gage	411
Florence	428
Fotheringham	426
Franklin	415
Frost Gage	419
French Copper	425
Field Marshal	426
Galbraith	419
Guthrie's Apricot	426
Guthrie's Apricot Plum	426
General Hand	426
Gifford's Lafayette	427
German Gage	409
German Prune	418
German Prune	427
Ghiston's Early	427
Golden Gage	410
Gonne's Green Gage	428
Golden Cherry Plum	416
Goliath	427
Green Gage	410
Grosse Reine Claude	410
Grosse Reine	410
Grosse Luisante	424
Grove House Purple	426
Grimwood's Early Orleans	410
Gwalsh	427
Harvest Gage	414
Hampton Court	410
Holland	427
Holland Prune	427
Horse Plum	427
Howell's Early	419
Howell's Large	428
Hudson Gage	420
Huling's Superb	419
How's Amber	419
Howard's Favorite	420
Iola Green Gage	410
Imperial of Milan	420
Imperial de Milan	420
Imperial Diadem	423
Imperial Rouge	428
Isleworth Green Gage	410
Isabella	420
Italian Damask	428
Italian Damask	420
Ickworth Imperatrice	420
Imperial Ottoman	418
Imperial Gage	411
Imperatrice Blanche	430
Imperatrice	416
Imperatrice Violette	416
Irving's Bolmar	415
Judson	427
Jaune Hative	426
Jaune de Catalogue	426
Jefferson	411
Jenkin's Imperial	411
Kirke's	420
Knight's Large Drying	427
Knight's No. 6	420
King of Plums	410
Lawrence's Favorite	413
Lawrence's Gage	413
Large Green Drying	427
Large Early Damson	427
Large Long Blue	421
Late Yellow Damson	430
La Delicieuse	424
La Royale	423
Leipzic	427
Little Queen Claude	428
Little Blue Gage	425
Lombard	413
Long Scarlet	430
Lucombe's Nonsuch	428
Manning's Prune	421
M'Laughlin	413
Madison	413
Mamelonne	421
Marten's Seedling	421
Mediterranean	421
Maitre Claude	430
Matchless	425
Manning's Long Blue Prune	421
Manning's Long Blue	421
Mirabelle Double	417
Mirabelle Grosse	417
Mirabelle	421
Mirabelle Petite	421
Mirabelle Jaune	421
Miser Plum	426
Mimms	423
Miriam	418
Monsieur	423
Monsieur Ordinaire	423
Monsieur Hatif	410
Monsieur Tardif	430
Morocco	421
Mulberry	421
Myrobolan	416
Muscle	423
New Washington	415
New York Purple	425
New Early Orleans	410
New Orleans	410
Nectarine	423
Noire Hative	426
Nota Bene	423
Old Orleans	423

PAGE
429
414
429
428
428
422
427
410
420
429
430
426
428
429
429
428
424
427
411
429
427
427
429
424
427
427
416
425
416
425
426
426
418
416
429
429
410
415
424
411, 414
426
430
430
424
424
424
424
424
430
430
430
430
428
410
410
410
427
430
410
424
417
424
424
434
434
434
434
435
434
435

	PAGE
Portugal	435
Pyriform	435
Paris de Fontenay	435
New Upright	435

RASPBERRIES.

American Red	444
American Black	440
American White	444
Barnet	444
Black Raspberry	440
Brentford Cane	445
Burley	443
Cope	440
Colonel Wilder	440
Cushing	441
Cornwall's Red	444
Cox's Honey	445
Common Red	441
Common Black-Cap	440
Cornwall's Prolific	444
Cornwall's Seedling	444
Cretan Red	445
Double-Bearing	445
Double-Bearing Yellow	444
Emily	441
English Red, of some	444
Ever-Bearing Ohio	445
French	443
Fulton	443
Fastolf	441
Franconia	443
Framboisier a Gros Fruit	443
General Patterson	432
Howland's Red Antwerp	443
Knevet's Antwerp	443
Knevet's Giant	443
Large-Fruited Monthly	443
Late-Bearing Antwerp	443
Large Red	444
Late Cane	445
Lord Exmouth's	444
Monthly	443
Mrs. Wilder	443
New Red Antwerp	443
Nottingham Scarlet	445
Orange	443
Ohio Raspberry	445
Perpetual Bearing	445
Rivers' New Monthly	443
Red Double-Bearing	445
Red Antwerp	443
Siberian	445
Thimble Berry	440
True Red Antwerp	443
Vice-President French	442
Victoria	445
Walker	444
White Thimbleberry	444
White Antwerp	444
Woodward's Red Globe	445
Wilmot's Early Red	445
Yellow Antwerp	444

STRAWBERRIES.

Aberdeen Bee-Hive	463
American Scarlet	459
Atkinson Scarlet	464
Austrian Scarlet	458
Alice Maude	456
Ajax	456
Bath Scarlet	466
Boston Pine	456
Burr's Rival Hudson	461
Bain's Extra Early	463
Bulst's Prize	463
Bostock	463
Bishop's Orange	456
Bishop's New	456
Black Prince	456
Black Imperial	456
Brewer's Emperor	459
Burr's New Pine	453
Burr's Seedling	456
Burr's Staminate Seedling	456
Burr's Old Seedling	457
Brilliant	456
British Queen	463
Caleb Cope	457
Crimson Cone	457
Charlotte	457
Climax	458
Climax Scarlet	458
Cole's Prolific	463
Cole's Late Scarlet	464
Cox's Seedling	464
Columbus	464
Caperon Royal	455
Cushing	457
Cleveland	457
Crescent Seedling	457
Cornucopia	458
Crimson Pine	464
Duke of Kent's Scarlet	458
Duncan's Seedling	458
Deptford Pine	464
Downton	464
Double Bearing	455
Dundee	458
Duke of Kent	458
Dutch Berry	457
Duchesse de Treviese	458
Elton Pine	464
Early Prolific Scarlet	458
Elton	464
Elton Seedling	464
English Red Wood	466
Eberlein's Seedling	458
Genesee	458
Globe Scarlet	464
Green Strawberry	459
Green Alpine	459
Green Pine	459
Giant Alpine	464
Goliath	464
Grove End Scarlet	464
Globe Hautbois	464
Green Wood	459
Greenwell's New Giant	466
Hovey's Seedling	459
Hudson	459
Hudson's Bay	459
Hooper's Seedling	459
Huntsman's	464
Iowa Male	459
Jenny Lind	459
Jenney's Seedling	455
Keen's Seedling	464
Knight's Seedling	464
Late Prolific	465
Lizzie Randolph	465
Large Early Scarlet	460

	PAGE
Late Scarlet	459
Longworth's Prolific	454
Lafayette of some	455
La Grange of some	455
La Liegoise	465
Marshall's Seedling	462
Magnifique	460
McAvoy's Superior	454
McAvoy's No. 12	464
McAvoy's No. 1	460
McAvoy's Extra Red	460
Montevideo Pine	460
Monroe Scarlet	460
Moyamensing	460
Mottier's Seedling	463
Myatt's Prince Albert	465
Myatt's Prolific	465
Melon	465
Methven Scarlet	460
Methven Castle	460
Musk Hautbois	455
Myatt's British Queen	463
Myatt's Pine	465
Myatt's Deptford Pine	464
Myatt's Elisa	465
Myatt's Eleanor	465
Myatt's Globe	465
Myatt's Mammoth	465
Newland's Mammoth	461
Necked Pine	460
Old Scarlet	465
Old Pine	465
Orange Hudson's Bay	456
Old Hudson	459
Orange Prolific	462
Ohio Mammoth	465
Pennsylvania	461
Profuse Scarlet	466
Profusion	466
Patagonian	466
Pine Apple	460, 465

	PAGE
Prolific, or Conical Hautbois	455
Princess Alice Maude	456
Primordian	461
Prolific Hudson	461
Prolific Swainstone	461
Primate	461
Prince of Orleans	466
Rostock	468
Refulgent	461
Red Alpine	461
Red Wood	466
Roseberry	466
Rose Phœnix	462
Ruby	461
Rival Hudson	461
Richardson's Late	461
Richardson's Early	466
Sulter's Versaillaise	462
Stafford's Alpine	461
Southborough	462
Southborough Seedling	462
Scioto	466
Scarlet Melting	466
Schneicke Seedling	454
Southampton Scarlet	460
Swainstone Seedling	462
True Chili	466
Taylor's Seedling	466
Unique Prairie	460
Unique Scarlet	463
Victoria	462
Wilmot's New Scarlet	466
Willey	462
Wiley	462
William Henry Harrison	466
Walker's Seedling	468
Western Queen	458
Wilmot's Superb	426
White Alpine	468
White Bush Alpine	466
Yellow Chili	466

APPENDIX.

APPLES.

Berry	470
Bud's Favorite	470
Cogswell	469
Cogswell Pearmain	469
Cranberry	470
Camac's Sweet	470
Callasaga	470
Dapper	470
Gray Pippin	470
Malden's Blush	469
Mountain Sprout	470
Nickejack	470
Ritter	470
Spotted Pippin	470
Summerour	471
Sturmer Pippin	471

GRAPES.

Brinckle	471
Cassady	471
Clara	471
Concord	471
Emily	472
Graham	472
Raabe	472
Raabe's No. 1	471
Raabe's No. 2	472
Raabe's No. 3	472
Raabe's No. 4	471

PEACHES.

Baxter's Seedling, No. 1	472
Gorgas	472
Jane	472

PEARS.

Barry	473
Downing	473
Doyenne Downing	473
General Taylor	473
Hovey	473
Regnier	473

C 34.1
I. C 52